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The Newspaper of the Industry

Air Conditioning & REFRIGERATION NEWS

Production Tools for Victory

AN INTERNATIONAL INSTITUTION ★ SUBSCRIBERS ALL OVER THE WORLD ★

Technical Governmental

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Victory Program Drive Will Open In Los Angeles

Coast Group Convenes Sept. 25; Meetings In East Are Postponed

LOS ANGELES—The far western meeting in the "Refrigeration War Drive" activity of the Victory Program for the Refrigeration and Air Conditioning Industry will be held Sept. 25 at the Biltmore hotel in Los Angeles.

Clarence F. (Sandy) Pratt, head of the California Refrigerator Co., San Francisco, will be chairman of the Los Angeles meeting. It is understood that John K. Knighton, director of the "Victory Program," will lead a group of the executive committee and other industry personnel who have volunteered to take a part in the "Refrigeration War Drive," to the west coast to help put on the meeting.

Eastern and midwestern meetings in the "Refrigeration War Drive" of the Victory Program have been postponed because there wasn't sufficient time allowed to complete preparations for the meetings, which had originally been scheduled to start with a session Sept. 14 in New York City.

However, the west coast group had gone ahead with so much enthusiasm under Mr. Pratt's direction, and plans were so far along that the decision was made to hold the Los Angeles session as scheduled.

(Concluded on Page 4, Col. 4)

Gov't Men To Talk To Locker Industry At Kansas City

KANSAS CITY, Mo.—"Meat rationing" and the many other factors of government controls and policies affecting the refrigerated locker storage field will hold the center of attention at the fourth annual convention of the National Frozen Food Locker Association, Inc., Sept. 22-24 at the Hotel Muehlebach in Kansas City.

The two main themes of the convention will be "food requirements"—how the locker industry can give maximum service to the war effort; and "priorities"—whether to build new plants or add to old ones, how applications are handled, what requirements have to be met, etc.

Among the speakers scheduled are:

Roland Welborn from the Office of Agricultural War Relations who will present "Allocation of Materials to the Frozen Food Locker Industry;" S. T. Warrington from the Office of Farm Credit Administration, now heading the agency through the Department of Agriculture for locker plant priority applications, who will tell about the WPB requirements, and K. F. Warner, H. C. Diehl, and R. P. Juhnichen, who represent vari-

(Concluded on Page 4, Col. 5)

All Dairy Convention Plans Are Cancelled

NEW YORK CITY—Dairy trade association executives announced last week that the annual meetings and conventions of the dairy and ice cream associations, and attendant exposition, scheduled for Memphis, Tenn. during the week of Oct. 18 to 24, have been cancelled as a war conservation measure.

How to Lose Friends and Alienate an Industry

"It takes too long to get things done around here," Donald Nelson is reported to have told a recent WPB staff meeting.

Brother, you can say that again.

It not only takes too long to get things done, but in the interim between the arrival at a decision and the actual issuance of an order, the public is subjected to so many conflicting statements and rumors that everybody gets all balled up. And when the order is actually issued, it is so phrased that whoever reads it seems to have a different interpretation of it.

A case in point is Amendment No. 2 to Order L-5-d, reported on this page. This case is so flagrant that it needs airing.

On July 27 household refrigerator manufacturers were called to Washington. This amendment was read to them. After listening courteously, they went home. They expected that the order would be made public in a day or two.

Weeks passed. Nothing more was heard about the order, except rumors in the newspapers. On Aug. 17 the NEWS, in a front page editorial, pointedly suggested that there was no valid reason for delaying the order longer.

More time passed. On Sept. 1 Lindsay Morrison, chief of the refrigerator section of the Consumers Durable Goods Branch, sent out a telegram to manufacturers telling them that L-5-d had not been amended. This gratuitous advice was offered, he said, "because of press and radio reports over the weekend that WPB was about to amend the refrigerator order to release a number of refrigerators now in frozen stocks of manufacturers and wholesalers."

Thursday night, Sept. 3, the NEWS innocently went to press with this telegram of Morrison's. (This was our bulletin issue dated Sept. 7—printed in advance, as usual, so it could reach subscribers on Monday.) Saturday, Sept. 5, Morrison's telegram was made to look mighty foolish—and so was the NEWS—by announcements released to the newspapers that L-5-d *had* been amended to release certain frozen refrigerators!

Either Lindsay Morrison didn't know what was going on with relation to his own order—and that's possible—or else he deliberately misled an industry and the American people.

Lindsay Morrison is personally a nice fellow. He was once employed in the industry. But the industry wonders why: (1) he called manufacturers down to Washington, told them that the order would be "issued immediately," (2) said nothing more about it for five weeks, (3) then issued a statement purportedly denying that the order was about to be issued just three days before it actually was made public.

This is precisely the sort of mess which Elmer Davis was called down to Washington to clean up; and we intend to lay this case before him. Also, we believe, it should be called to the attention of Morrison's boss, the able and well-liked John Hurley, Chief of the Consumers Durable Goods Branch of the WPB.

The Refrigerator Section occupies desks in an old high school building. When last heard from, it was apparently engaged on research into the history of the refrigeration industry! (We have correspondence to prove this.)

No doubt the entire industry will concur in the belief that the Refrigerator Section might much better devote its time and energies to the expediting of whatever orders it chooses to emit, and to clearing up—rather than adding to—the confusion which always seems to attend such orders.

'Service Racket' Hurts Legitimate Business In Eastern States

NEWARK, N. J.—Service business solicitation potentialities in this area have been weakened by the appearance of a "service racket," which would make housewives prey for crooks posing as gas and electrical repair men.

In issuing a warning Sept. 5 to housewives, Newark police said there were indications the service racket was working its way East after more than a score of incidents had been reported in the Midwest.

Crooks posing as repair men for electrical appliance or utility companies call upon householders to obtain their appliances and then sell them in another city.

Wearing white coveralls, some even with a fictitious firm name lettered on the front, the "service-

(Concluded on Page 4, Col. 5)

Salem Engineering Co. Buys Tolerton; To Make, Install Food Lockers

SALEM, Ohio—Salem Engineering Co. here has purchased the Tolerton Engineering Co. of Youngstown, Ohio. The Salem Engineering Co. will maintain the offices of the Tolerton Engineering Co. in Youngstown operating it as a subsidiary company.

The new division sells, manufactures, and installs locker storage systems, fast freeze units—commercial and for the home; air conditioning and refrigeration units, both process and commercial. These new Salem products include the Hallwood Locker Systems and many entirely new patented features.

O. R. Tolerton, formerly president of the Tolerton Engineering Co., has been named manager of the new air conditioning and refrigeration division.

100,000 Household Refrigerators 'Unfrozen' For Sale By Dealers

Surprised Dealers Have No Answer for Angry Customers

DETROIT—Spurred on by press and radio announcements that picked up the WPB news release that "50,000 'frozen' mechanical refrigerators would be freed for sale to the public" by the order issued Sept. 5, buyers in this milling War Production center marched into stores here the day after Labor Day—only to walk out angry and perplexed when they found there weren't any available.

Dealers, the great majority of whom had no information about the order other than what they read in the newspapers, were unable to explain why the refrigerators weren't readily available. Newspapers were badgered by would-be buyers and published discouraging follow-up stories such as the one which appeared in the Sept. 9 issue of the "Detroit Times:"

"The WPB order freeing 50,000 'frozen' mechanical refrigerators for sale to the public throughout the United States will have little or no effect in the Detroit area, a canvass of distributors revealed today.

"A checkup revealed that the inventories of the independent distributors, the only group affected by the order, total approximately 40 electric refrigerators, all held by one firm."

When the order gets into operation, there will be more refrigerators available. But the WPB could have saved itself a lot of ill-will and criticism if it had chose to prepare the refrigerator dealers of the country on how Amendment No. 2 was to operate—through the medium of the trade press.

Dealers Bear Brunt Of Warehouse Cost On Released Units

WASHINGTON, D. C.—A new method of computing warehousing allowances, which distributors as well as manufacturers may add to their base prices for new household mechanical refrigerators in sales allowed by the War Production Board, was announced Sept. 9 by the Office of Price Administration.

This action follows WPB's release last week of approximately 100,000 household refrigerators from stocks previously frozen by WPB order.

The OPA measure does not alter prices paid by ultimate retail consumer, since it provides a method in which the manufacturer, distributor and retailer absorb proportionately the costs of warehousing "frozen" stocks and refrigerators. The measure differentiates, however, between "ultimate" and "wholesale consumers." The latter classification of purchasers, buying for industrial and commercial rather than household use, will pay the full amount of the increased costs.

The adjustments, embodied in Amendment No. 4 to Maximum Price Regulation No. 110 (Resale of New Household Mechanical Refrigerators) and Amendment No. 4 to revised Price Schedule No. 102 (Household Mechanical Refrigerators), will become effective Sept. 9.

Other features include the following:

(1) A cut-off date, Sept. 13, which ends the warehousing allowance period for purposes of computation.

(Concluded on Page 7, Col. 1)

All Stocks In Hands of Independent Distributors Available To Retailers

WASHINGTON, D. C.—Approximately 100,000 domestic mechanical refrigerators frozen in the hands of distributors, dealers, and manufacturers since Feb. 14, were released for sale to the general public on Sept. 5 by an amendment to Supplementary General Limitation Order L-5-d.

This is what Amendment No. 2 to Order L-5-d will mean in making refrigerators available to the trade:

It releases for sale to dealers any and all refrigerators in the hands of independent distributors (but not factory branches). Best industry estimates are that there are not many more than 30,000 refrigerators in distributors' stocks.

It releases for sale to consumers any new gas domestic refrigerator which, at 10 a.m. eastern war time, Feb. 14, 1942, was in the inventory of a dealer or independent distributor (gas refrigerators in the hands of retailers have been frozen, while electric refrigerators in dealers' hands have not). It is estimated that there might be some 20,000 of such units.

Sets up a program for transfer of certain deluxe model refrigerators held by manufacturers and their affiliated distributors (branches) to retail dealers and other outlets. It is thought that some 50,000 of such units might be available.

There are certain very important "qualifying" terms to Amendment No. 2 to L-5-d.

Distributors (and manufacturers and branches when permitted to under amended paragraph (c) (2) of the order) must transfer the released refrigerators, as far as is practicable, through their normal distributive outlets on a basis proportionate to his distribution of new domestic mechanical refrigerators to them, respectively, during the year 1941, regardless of any previous commitments or contracts.

Any sale of a new domestic mechanical refrigerator to an ultimate consumer may be made only if the consumer certifies in writing that he has no other refrigeration equipment at his disposal.

Considerable confusion was generated in the minds of the industry as well as the public by references in the official WPB news releases about the "unfreezing" to the effect that "chiefly" deluxe models would be released for sale. The order itself makes no specific mention of this factor, but this is how it works out:

1. Any refrigerator—deluxe model or the standard 6 and 7 cu. ft. jobs—in the hands of an independent distributor can now be sold subject to the terms of Amendment No. 2.

2. Under the provisions of paragraph (c) (2) as amended of L-5-d refrigerators will be transferred from manufacturers and their branches to distributors, dealers, or consumers under the certificate of

(Concluded on Page 16, Col. 1)

Refrigeration Used In Food Drying Process

KANSAS CITY, Mo.—A new method for drying foods—involving refrigeration—that eliminates the use of heat which might destroy the food values has been developed, according to a patent (No. 2,292,447) granted to James C. Irwin, Jr. of this city.

With dried foods taking on added importance in shipments abroad to our Allies because of the saving in

(Concluded on Page 13, Col. 2)

What Dealers Are Doing About Merchandise Shortages

Seeking Odd Lines? Glance Over These

NEW ORLEANS—Walther Bros., Philco distributor here, is handling one of the most diversified lines of substitute merchandise in the south, according to B. C. Walther, general manager.

New lines include Philco industrial storage batteries for boat use, glassware, concrete dye, air-raid shatterproofing materials for window glass, paint and varnish, coffee makers in glass and porcelain, white sidewall tire dressings and rubber preservatives, folding chairs, rubber tube repair kits, and ice refrigerators.

Some of our dealers have taken on the whole line and all of them have taken on two or three at least.

7 New Housing Areas

WASHINGTON, D. C.—The War Production Board has added seven new areas to the Defense Housing Critical Area List. They are: Lakehurst-Toms River, N. J.; Goldsboro, N. C.; Zelionople, Pa.; Vincennes, Ind.; Pecos, Tex.; Laredo, Tex.; Grenada, Miss.

Jenkins Adds 61 New Household Items

KANSAS CITY, Mo.—Jenkins Music Co., large-scale appliance dealers here, have set something of a record in the last two months for the number of "sideline" items added to stock. Altogether there are 61 new lines in the Jenkins stores, including every type of household item, and sufficient to keep Jenkins operating through the war without a single appliance, according to Ken Gillespie, salesmanager.

Radford Leases Building For Reconditioning

NEW ORLEANS—Oliver Radford, president of Oak Appliance Co. here, large New Orleans Philco dealership, has leased a five story building at 532 Canal St. for use as a showroom, storage warehouse, and reconditioning shop for all major appliances. The building is next door to the main store, which will continue in business through the war on the basis of buying, reconditioning, and selling used appliances from residents moving away through war activities.

Goodyear Store Offers Guaranteed Service

Announcing--
A NEW GUARANTEED ELECTRIC APPLIANCE REPAIR SERVICE
Here is a service you can depend on . . . We now have available an electrical specialist trained in maintenance and repairs to handle your every electrical appliance need. A phone call will bring service. No repair service too small or too large on electrical equipment. Call 8821 for reliable guaranteed service.
Reliable Guaranteed Service
• REFRIGERATORS • IRONS
• RANGES • WASHERS
• SWEEPERS • FANS
MOTOR LUBRICATION AND REPAIRS
DRIVES ADJUSTED • INSPECTION
ALIGNMENT CHECKING
GOODYEAR SERVICE STORE
CORNER LEE & BIBB
PHONE 8821

BIRMINGHAM, Ala. — Goodyear Tire & Rubber Co. "service stores" in several Alabama cities are advertising a "new guaranteed electric appliance repair service" and causing something of a mild sensation among the appliance trade here.

In Montgomery the Goodyear store announced "no repair service too small or too large on electrical appliances" and also stated that it "is prepared to handle motor lubrication and repairs, adjust drives, and do whatever is necessary to 'make your appliances outlast the Japs.'"

Statement Made on Prices For Rentals Of Refrigerators

WASHINGTON, D. C.—Rental of refrigerators and refrigeration are covered by certain of the price regulations issued by the Office of Price Administration, according to Henry M. Hart, Jr., associate general counsel of the OPA.

"Rental charges for refrigerators equipped with motors of 25 hp., or more, are covered by Maximum Price Regulation No. 136 as Amended," states Mr. Hart. "Sections 1390.5 and 1390.12 provide for maximum prices of rentals covered by Maximum Price Regulation No. 136.

"Section 1499.101 (c) (28) of Maximum Price Regulation No. 165 expressly includes the rental of refrigerators in the list of services covered by Maximum Price Regulation No. 165. Inasmuch as Section 1499.120 of that regulation provides that Maximum Price Regulation 165 shall not apply (except Sections 1499.11 and 1499.12) to any sale of such of those services set forth in Section 1499.101 (c) for which a maximum price is in effect under the provisions of any 'price regulation' other than the General Maximum Price Regulation, issued or which may be issued by the OPA, therefore Maximum Price Regulation applies to the rental of refrigerators of less than 25 hp.

"That regulation establishes maximum prices at the highest prices charged in March, 1942, by the seller to a purchaser of the same class for the same or a similar service."

Buyers and Sellers of Used Refrigerators Are Helped by Ga. Power Co.

ATLANTA—Expansion of the Customer Service Program of the Georgia Power Co. now includes putting buyers and sellers of used electric refrigerators in touch with one another purely as a free public service.

Here's how it works:

A customer having a used refrigerator he wants to sell should call the nearest Georgia Power office and describe the refrigerator giving the manufacturer's name, the model number, age, size, condition, and the price he sets on it.

The company will record this information and have it available for any customer who wishes to buy a refrigerator.

If the company cannot immediately put a buyer in touch with someone who has approximately what he wants, his name will be added to the "refrigerator wanted" list and he will be notified when one is available.

"The company will not buy or sell refrigerators. Maintaining the information bureau will be the extent of our service. We cannot undertake to act as agent for the sale or purchase of refrigerators, nor will we assume any obligation whatever. This is to be an informational service purely and simply—available to any and all of our customers," the company explains.

Knoxville Board Sponsors Appliance Exchange Plan

KNOXVILLE, Tenn.—"Keep 'Em Working," a slogan for a campaign to keep appliances operating and an exchange for used appliances, is being sponsored by the Knoxville Electric Power and Water Board officials in cooperation with dealers.

At the start of the campaign this year, 35,000 bill stuffers were sent to customers. An offer was made to check on appliances and advise what to do about those needing repairs.

For the exchange, said J. W. Goans, of the board's Customers Information Service, customers call in when they have appliances for sale. Name, address, telephone number, make of the appliance, and how long in use is recorded and filed.

When another customer calls in to buy an appliance she is informed from information in the files as to where she can get a used appliance.

'Pass Me the Wrench, Mabel', New Byword In Service Shop

KANSAS CITY, Mo.—Replacement of four service mechanics who formerly spent eight hours a day in repairing and rebuilding major electric appliances with women employes has made war-time operation a much easier job for the Zimmerman Appliance Co., Frigidaire dealership here.

Converting 100% to service early in January, Paul Zimmerman, manager, recognized immediately that it was going to be difficult to obtain additional refrigeration service men—in fact, he lost six of his own salesmen and mechanics in a matter of weeks. Consequently, he hired four husky, intelligent girls now trained to take over every shop call. The four men mechanics now handle outside calls exclusively.

Buyer Sues Dealer For Overcharge on Used Ceiling Price

ROCHESTER, N. Y.—Overcharge on a ceiling priced used refrigerator brought on the first test case of its kind in this vicinity when Benjamine Levine, operator of a second-hand furniture store, was sued for three times the amount he allegedly overcharged.

The plaintiff in the action is the Rev. Joseph Harte, who claims that Mr. Levine charged him $200 for a used refrigerator with a ceiling price of $87. The alleged overcharge for the item is $113, and the Rev. Harte is suing for $339.

The suit filed in Monroe County Court alleged that "in making the sale and in making the delivery of said refrigerator, the defendant violated the provisions of Public Law 421-77th Congress, known as 'Emergency Price Control Act of 1942,' and violated order and regulations of the Office of Price Administration known as 'Maximum Price Regulation No. 139, Used Household Mechanical Refrigerators."

Tire Rations Cut; Stiffen Regulations

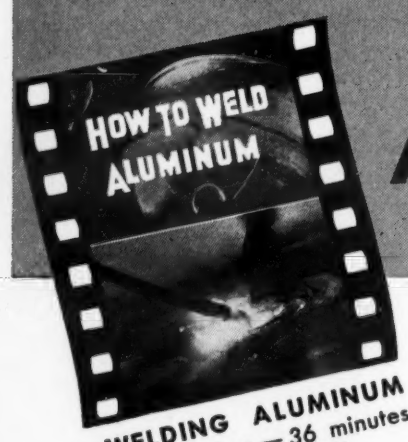
WASHINGTON, D. C.—Warning that tire quotas will have to be cut in September from the August level, the Office of Price Administration has called upon the local War Price and Rationing Boards for the "strictest possible interpretation" of a recent amendment to the tire rationing regulations restricting truck eligibility to vehicles essential to the war effort or public health and safety.

A letter to the boards explains that the War Production Board, which allocates rubber for military, civilian and other uses, has notified OPA that allotments for tires must follow a downward trend for the remaining months of 1942 in order to stay within the amount of rubber earmarked for the purpose.

Although the reduced allocation follows a seasonal pattern of prior years when truck tire use tapered in the fall and winter months, it comes at a time when war production and kindred activities are keeping many heavy vehicles at work night and day. It was to provide tires for these and other essential trucks that OPA late in July made a change in its rationing regulations which will result in denying tires to an estimated 200,000 vehicles carrying alcoholic beverages, soft drinks, candies, furs and other luxury goods.

During the past five months when quotas have been increased monthly to take care of additional requirements during the hot months, some local boards have followed a practice of carrying over unfilled applications from one month in anticipation of a larger quota in the next, says the OPA. With the trend now scheduled for reversal, however, OPA urges in its letter that each application be considered in light of each month's quota.

3 NEW FILMS
FOR TRAINING
ALUMINUM WORKERS



WELDING ALUMINUM
Running time—36 minutes

RIVETING ALUMINUM
Running time—26 minutes

MACHINING ALUMINUM
Running time—32 minutes

Valuable "how-to-do-it" data on Welding, Riveting and Machining Aluminum is contained in these three, brand-new sound motion pictures. Designed to supplement texts and teaching, these films are offered for your assistance in training war workers in the fabrication and assembly of Aluminum Alloy parts and structures.

No drama, no humor, no romance! Every foot of these films is packed with hard-hitting task instruction.

"How To Weld Aluminum" describes and demonstrates the various essentials of torch and arc welding, brazing and resistance welding. "How To Rivet Aluminum" portrays the making and testing of rivets, preparation of the work, actual rivet-driving techniques and inspection. "How To Machine Aluminum" discusses alloys usually used, the kind and shapes of tools, cutting compounds, speeds and feeds

Task instruction is made easier.

35 mm. and 16 mm. SOUND PRINTS
AVAILABLE FOR LOAN OR PURCHASE

Prints of these black and white, sound motion pictures are loaned free.

List the titles of the pictures you want . . . your first and second choice of dates when you want them . . . whether you want 35 mm. or 16 mm. prints . . . and the approximate number of days you expect to use them. (NOTE: These films can be shown *only on sound projectors.*)

If you want to purchase prints for your permanent library, they are available at cost, shipping charges prepaid. Prices follow.

	16 mm. with fibre container	35 mm. with metal container
How To Rivet Aluminum	1200-ft. reel . . $42.80	2000-ft. reels . . $103.80
How To Weld Aluminum	1600-ft. reel . . 62.70	2000-ft. reels . . 176.30
How To Machine Aluminum	1200-ft. reel . . 50.70	2000-ft. reels . . 123.55

Send your requests for loan or purchase to Aluminum Company of America, 1975 Gulf Building, Pittsburgh, Pennsylvania.

See these films at the National Metal Exposition, Cleveland, October 12-16.

ALCOA ALUMINUM

ICE CUBES FOR JAPAN!

Listen, Tojo—when you hear that *karump* some night and the factory walls start sliding into the sea—look out, it's one of those new "ice cubes" from Nash-Kelvinator!

We are building *plenty* of them for you—Kelvinators that fly and ice cubes that hurt.

Monster metal-bellied flying boats—growing on Nash-Kelvinator assembly lines—to whisk the Navy's men and material to any spot you raise your head! Giant Vought-Sikorsky cargo carriers built *complete*—and not in ones or twos, but in fleet upon fleet!

Want to hear some more?

Then listen—that angry hum coming out of the East—

They are propellers built by Nash-Kelvinator, built by the many thousands!

And that mighty roar you'll soon be hearing is the voice of the most powerful engine ever placed in a pursuit ship. It will take the Navy's new *Corsair* higher, faster than any "Zero" in your stable.

They're coming, Tojo—coming from men who, in building last year's refrigerators and automobiles, thought only of a nation's health and happiness.

But now, it's hate and vengeance and the remembrance of a thousand Axis wrongs that are guiding their hands . . . breaking every production record in Nash-Kelvinator history by two and three.

Look out, Tojo, *the nights are growing longer* . . .

NASH-KELVINATOR CORPORATION

NASH KELVINATOR

PRATT & WHITNEY HIGH-ALTITUDE ENGINES

NAVY'S GIANT VOUGHT-SIKORSKY FLYING BOATS

HAMILTON STANDARD PROPELLERS

One of a series of full-color Nash-Kelvinator advertisements running in a wide list of national magazines.

To Kelvinator Dealers:

All wars end. Tomorrow, with the peace of victory, and with refrigerators to sell, there will be the *greatest number of prospects* that ever walked into the stores of America.

You and I want them to buy Kelvinators . . . and today Nash-Kelvinator is taking an important step toward that goal.

This month—in leading national magazines—you will see a new series of powerful color-page advertisements, designed to accomplish three things:

1. To report to our present and future owners on the vital part Nash-Kelvinator is playing in America's war effort—building fleets of great cargo-carrying flying boats, and engines for the highest-flying fighting ships in the world.
2. To promise that the Kelvinators of the peace-time to come will be finer, better than ever, because of the extreme precision craftsmanship acquired in Kelvinator's war work.
3. To maintain and to increase, for the future profit of Kelvinator retailers, the brand preference for Kelvinator.

Therefore, I know it will be a source of pride and satisfaction to you to know that Kelvinator advertising will be talking to the nation regularly from the pages of important magazines.

Also, I feel confident that when the name of Kelvinator comes back from war, it will have a new and deeper significance to the American people—and will be of even greater value to the retailer franchised under the Kelvinator Selective Dealer Policy.

Frank R. Pierce
Vice President in Charge of Sales

KELVINATOR

DIVISION OF NASH-KELVINATOR CORPORATION

PRATT & WHITNEY HIGH-ALTITUDE ENGINES

NAVY'S GIANT VOUGHT-SIKORSKY FLYING BOATS

HAMILTON STANDARD PROPELLERS

Minneapolis-Honeywell Gets Army-Navy Award

First To Be Presented In Chicago District

MINNEAPOLIS — Minneapolis-Honeywell Regulator Co. received the first joint Army-Navy Production Award in the Chicago Ordnance District by its demonstration of how the experience developed in 50 years of building heating, refrigeration, and other types of automatic controls has been converted to volume production of high precision military instruments.

"E" flag was presented to Harold W. Sweatt, company president. The award granted the Minneapolis plant of M-H for its outstanding "achievement in the production of war materials for both the Army and Navy was preceded one day by a similar celebration held at Wabash, Ind., where another plant is located.

War activities of the company cover a wide range of manufactures which include sighting equipment for the Navy and controls and gun sights for the Army.

Minneapolis-Honeywell is still making a limited number of its peacetime controls for government and defense-housing projects, and in addition, is manufacturing replacement parts for civilian use.

The company has been able to adapt many of the principles of its peace-time controls to war use, and has recently developed new war devices which hold promise for further advances in all types of controls after victory.

Gov. Harold E. Stassen of Minnesota speaks at the presentation of the joint Army-Navy production award to the Minneapolis-Honeywell Regulator Co. Left to right. H. W. Sweatt, president of M-H; Brig. Gen. Donald Armstrong, chief of the Chicago Ordnance District; Lyman E. Wakefield, president, First National Bank and Trust Co., Minneapolis; Gov. Stassen.

Special buses brought the night-shift workers to the Minneapolis Armory, where the ceremony was held, and rushed them back immediately following the 45 minute "formal" program so that a minimum of production time was lost.

Lyman E. Wakefield, president of the First National Bank and Trust Co. here, lauded the firm's output of precision instruments and controls.

"Not the least of your contributions has been the application of intricate control devices to military aircraft," he said. "Created on an entirely new principle by Minneapolis-Honeywell technicians, these devices have added materially to the offensive power of the air force."

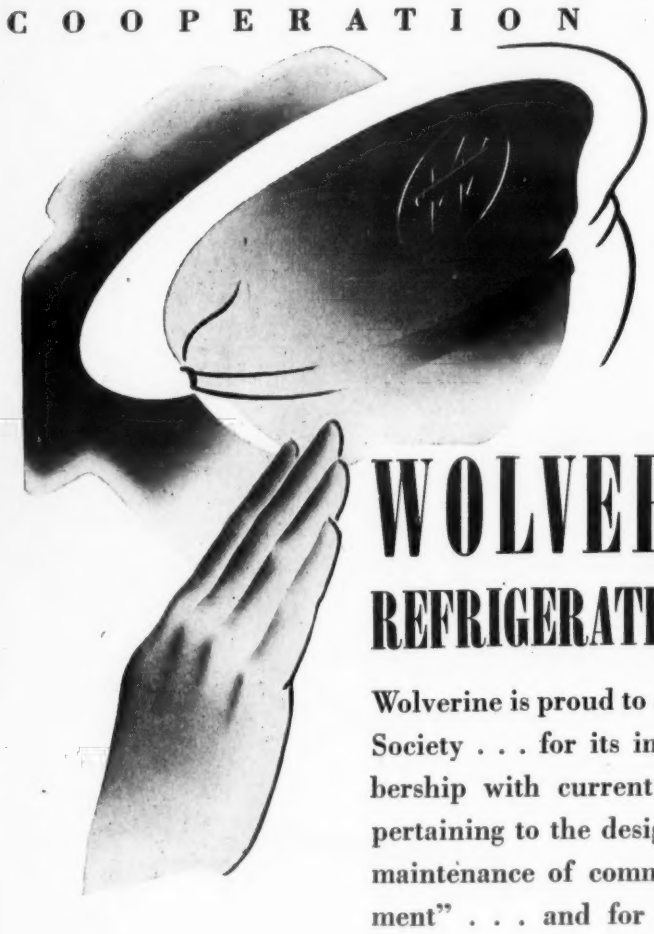
Philco Income Down; Tax Provision Up

PHILADELPHIA — Philco Corp. reports a net income of $166,986 or 12 cents per share on the 1,372,143 shares of common stock for the second quarter of 1942 after provision for estimated Federal and State income and profits taxes.

This compares with the net income of $402,835 or 29 cents per share in the second quarter of 1941.

For the first six months of 1942, net income amounted to $449,777, which was equivalent to 32 cents per share.

C O O P E R A T I O N W I N S T H E W A R



WOLVERINE SALUTES
REFRIGERATION SERVICE ENGINEERS

Wolverine is proud to salute the Refrigeration Service Engineers Society . . . for its impressive success in "providing its membership with current and authentic educational information pertaining to the design, construction, operation, servicing and maintenance of commercial and domestic refrigerating equipment" . . . and for its equally outstanding achievement in encouraging "the adoption of ethical standards of practice and assisting in the stabilization of the service business."

Now in its tenth year, the Refrigeration Service Engineers Society today numbers approximately 2,000 members in 65 local chapters in the United States and Canada.

During these past ten years, Wolverine has wholeheartedly cooperated with this progressive organization. And to the Society, and to the refrigeration industry as a whole, we pledge present and future cooperation to the very utmost of our ability and long experience.

Wolverine will continue to offer refrigeration tube of only the highest quality—quality that is now carefully controlled from ore to finished product.

MR. E. A. PLESSKOTT
President of the Refrigeration Service Engineers Society.

WOLVERINE TUBE DIVISION
OF CALUMET AND HECLA CONSOLIDATED COPPER COMPANY
Seamless COPPER • BRASS • ALUMINUM
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First 'Victory Program' Meeting of the Industry Is In Los Angeles Sept. 25

(Concluded from Page 1, Column 1)

The coast meeting will also probably serve as something of a test and model for the kind of meetings that may follow in other parts of the country.

Program at Los Angeles on Sept. 25 is as follows:

9 a.m. to 12 noon—Meeting called to order in Conference Room No. 2 on private dining room floor.

12 noon to 1:30 p.m. — Luncheon and program in room near Conference Room No. 2.

2 p.m. to 5 p.m.—Program in Conference Room No. 2.

5 p.m. to 6 p.m.—As you please.

6 p.m. to 9:30 p.m.—Informal dinner and program near Conference Room No. 2 or corner of main dining room.

The Victory Program activity, Director Knighton explains, is a physical manifestation of the desire, willingness, and ability of the Refrigeration and Air Conditioning Industry to contribute materially to the winning of the war through the medium of "conservation." It is a voluntary movement with the endorsement of the WPB.

The attainment of the objectives of the program is not only essential to the war effort, Mr. Knighton explained, but it will have inestimable value in providing a unity of purpose which, in turn, will bring about a unity of action and an understanding of mutual problems in the industry.

The only purpose of this program is that of Conservation, and as such, it will embrace all activities considered essential to the war program.

The conservation of critical materials will be handled on an advisory basis directly through the principal departmental functions of the industry, such as Product Design, Production, Application, Installation, Service, Maintenance.

The conservation of manpower and manufacturing facilities are also of utmost importance and a brief survey of these two subjects, says Mr. Knighton, brings to light the urgency of an immediate effort to highlight the essentiality of the products of this industry in the production of implements of war and in the preservation of foodstuffs and other materials for the armed forces as well as essential civilian requirements.

Officers and Committees for Western "Victory Program" meeting at Biltmore hotel, Los Angeles, Friday, Sept. 25, 9 a.m. till 9 p.m.:

Clarence F. (Sandy) Pratt, president of California Refrigerator Co. of Oakland and San Francisco, chairman.

S. E. Gates, manager, General Electric Supply Co., Los Angeles, vice chairman.

Robert O. White, Day & Night Mfg. Co., Monrovia, Calif., secretary.

David Linder, Linder Hdw. Co., refrigerator distributor, Tulare, Calif., sergeant-at-arms.

Gordon Clark, president of American Society of Refrigeration Engineers of Southern California, Los Angeles, assistant to chairman.

L. P. Roth, Refrigeration Service, Inc., Los Angeles, official photographer and publicity manager.

Committees on Arrangements

Peter H. Askew (chairman), Refrigeration Supplies Distributor, Los Angeles; W. C. Irving, president of Los Angeles Chapter of Refrigeration Service Engineers Society, Santa Monica, Calif.; C. L. Bowman, Gates Rubber Co., Denver; E. R. Nottingham, Jacobs & Gile, Inc., Portland, Ore.; Charles Merrill, president Refrigeration Engineers Group, San Francisco; Harold G. Stern, Refrigerative Supply, Inc.; Seattle, Wash.; W. W. Bintz, Frigidaire distributor, Salt Lake City, Utah; E. E. McLaughlin, York dealer, Phoenix, Ariz.; W. G. Waltz, appliance distributor, El Paso, Tex.; A. Harris, Harris Ice Machine Co., Portland, Ore.; Doc Armour, Arbell Refrigeration Supplies, Fresno, Calif.; Claude E. Saviers, Air Conditioning and Refrigeration distributor, Reno, Nev.; Robert Hinshaw, Hinshaw Supply Co., Sacramento, Calif.; Victor Bachechi, New Mexico Air Conditioning Co., Albuquerque, N. M.

H. Jarvis, Refrigeration Engineering, Inc., Los Angeles; Ash Chamberlin, Frigidaire dealer, San Diego, Calif.; L. A. Bailey, manager, Pacific States Cold Storage Warehousemens Assn., San Francisco; Ike Bell, president, Air Conditioning Society of California, San Francisco; C. H. Webber, Pacific Scientific Co., Refrigeration and Air Conditioning Supplies, Los Angeles; E. J. O'Connell, Refrigeration Manufacturers Agent, Los Angeles; W. R. Burnett, president, Frosted Food Locker, Inc., Hollywood, Calif.; J. Henry Janes, Refrigeration, Salt Lake City, Utah.

Clark Chamberlin, secretary, Appliance Association, San Diego, Calif.; D. T. Ward, Ward Refrigerator Co., Los Angeles; George Winter, president, National Association Practical Refrigerating Engineers, San Francisco; George L. Smith, Supermade Ice Cream Factory, Boise, Ida.; Carl White, Refrigeration Supply Co., Phoenix, Ariz.; Edward Barnes, Nash-Kelvinator Co., Los Angeles; Leo H. Gorton, past president, National Refrigeration Supply Jobbers Assn., Tulsa, Okla.

Reception Committee

R. E. Ristow (chairman), president, Drayer and Hanson, Inc., Los Angeles; Roy M. Hagen, president, Los Angeles Cold Storage Co., Los Angeles; John M. Jorgensen, Refrigeration manager, the von Hamm-Young Co., Ltd., Honolulu, H. T.; J. J. Hoey, secretary, Refrigerated Locker Operators' Association of California, San Francisco; Ralph Nesbitt, S. Birkenwall Co., Portland, Ore.; W. E. Lee, Westinghouse Electric and Manufacturing Co., Butte, Mont.

Resolutions Committee

Jess E. Rauch, California Refrigerator Co., San Francisco; Nelson Woodall, Virginia Smelting Co., San Francisco; Karl Weber, Weber Showcase & Fixture Co., Los Angeles; William H. Bentley, Commercial Frozen Food Manufacturers, San Francisco; Robert Jordan, Refrigeration engineer, Palo Alto, Calif.; A. R. Wingard, York distributor, Tacoma, Wash.; C. J. Bachman, western manager, Nash-Kelvinator Co., Oakland, Calif.; Walter Schroeder, general manager, Pacific Metals Co., San Francisco; Frank J. Walter, Walter Refrigeration Supply Co., Houston, Tex.; Robert Fish, Valley Refrigeration Service, Tulare, Calif.

Registration Committee

Mrs. Franklin G. Slagel (chairman), Los Angeles; Theo Howard, Mueller Brass Co., Los Angeles; Dewitt Clark, Manufacturers agent, Los Angeles; Mrs. J. A. McLaren, Tecumseh Products Co., Los Angeles; Van D. Clothier, manufacturers agent, Los Angeles; Al Meyer, president, Meyberg Co., Norge distributor, San Francisco and Los Angeles; Kurt W. Rose, manufacturers agent, Los Angeles, and Mrs. Hal Clay, Refrigeration Supplies, Los Angeles.

Newark Taking Steps To Curb Racket by 'Fake' Servicemen

(Concluded from Page 1, Column 2)

man" rings the doorbell and asks whether the housewife has considered "the importance of keeping your appliances in perfect condition for the rest of the war."

If allowed to inspect the kitchen range, refrigerator, radio or washing machine, he quotes a low rate for a guaranteed overhaul job. Helpers wheel the appliance away on a dolly while the "serviceman" makes out a fake receipt for the appliance.

The appliance is then driven to a warehouse or concealed shop where necessary appearance changes are made. Then it is shipped out to be sold several hundred miles away in some other city.

City Public Safety Director John B. Keenan said he hoped an ordinance, scheduled for final passage Sept. 9 by the Newark City Commission, "will effectively curtail" such rackets in this city. The new city measure requires fingerprinting and issuance of identification cards for all door-to-door solicitors.

Annual Locker Plant Convention to Open Sept. 22 in Kansas City

(Concluded from Page 1, Column 1)

ous government agencies and who will present an overall picture of the national problems involved.

Bruce L. Melvin from the Office of Price Administration will talk on the restrictions placed on locker plants by the regulations on services. Miss Miriam Birdseye, nutrition expert, will give operators a better idea of contacts and work with local extension agencies.

Other features of the convention program include a discussion of what state associations have done to coordinate activities of operators, a discussion of the results of 1941-1942 locker survey, a discussion of income from locker plant by-products, the locker management training course, and a discussion of meat curing as a specialty service.

There will be four breakfast sessions—two on Wednesday morning, and two on Thursday morning.

Covey To Bigger Store

LITTLE ROCK, Ark.—The Covey Appliance Co. here, headed by John A. Covey, has moved to a new store at Fourth and Center Streets, with a larger shop and showroom. The store is concentrating on service business.

WPB Sets Up Specifications on Coil or Tube Assemblies For Refrigeration Condensers, Coolers

(Official WPB Release)

WASHINGTON, D. C. — As a means of saving copper, zinc, tin and other critical materials, the Director General for Operations of the WPB has issued an order setting forth manufacturing specifications for coil tube assemblies for refrigeration condensers or coolers.

The schedule of specifications, which becomes a part of Limitation Order L-126, limits the use of non-ferrous metals, the weight of ferrous metals and the percentage of materials which may be used as a coating or bonding material in the manufacture of coil or tube assemblies.

It is estimated that the rigid specifications will result in the saving of approximately 40 pounds of copper per ton of refrigeration capacity. Based on production figures of 1941, this would mean an annual saving of at least 3,100 tons of copper, in addition to further savings in steel, zinc and tin.

(Required Specifications Schedule III to Limitation Order L-126)

Coil or Tube Assemblies for Refrigeration Condensers or Coolers

§ 1071.5 **Schedule III to Limitation Order L-126†.—(a) Definitions.** For the purpose of this schedule:

(1) "Producer" means any person who produces, manufactures, processes, fabricates or assembles any coil or tube assemblies for refrigeration condensers or coolers.

(2) A "coil or tube assembly for condensers" means an assembly used in "refrigerating and air conditioning equipment" as defined in paragraph (a) (1) of Limitation Order No. L-126 consisting of any arrangement of pipes, tubing, pressure vessels, or plates by means of which heat is removed from the vaporized refrigerant.

(3) A "coil or tube assembly for coolers" means an assembly used in "refrigerating and air conditioning equipment" as defined in paragraph (a) (1) of Limitation Order No. L-126 consisting of any arrangement of pipes, tubing, pressure vessels or plates by means of which heat is absorbed by either a volatile refrigerant or a non-volatile medium such as water.

(4) "Protective coating" means a surface coating applied to any or all parts of a "coil or tube assembly for condensers or coolers" for the purpose of retarding or preventing corrosion.

(5) "Integral fin tubing" means finned tubing, the fins and tubes of which are formed from the same piece of metal by extrusion or by any machine operation.

(6) "Metallic fin bond" means a tie between tubing and fins obtained through the use of a metallic base substance usually applied with heat. The fin surface of integral fin tubing shall be considered as having a metallic fin bond.

(7) "Mechanical fin bond" means a tie obtained between tubing and fins by physical contact and without the use of a metallic base substance.

(8) "Fin height" means the distance from the outside of a pipe or tube to the nearest outside edge of the fin.

(9) "Return bend" means a semi-circular section of tubing or pipe used to join parallel runs of tubing or pipe.

(10) "Lend-lease country" means the government of any foreign country receiving aid pursuant to the Act of March 11, 1941, entitled "An Act to Promote the Defense of the United States" (Lend-Lease Act).

(b) **Required specifications.** Pursuant to Limitation Order No. L-126, the following required specifications are hereby established for coil or tube assemblies for condensers or coolers:

(1) In the manufacture of any coil or tube assembly for air-cooled or evaporatively cooled condensers, any coil or tube assembly for water or brine coolers, or of any cooler coil or tube assembly for air-cooling, no producer shall, except for use aboard ship, (i) use any non-ferrous metals, except for soldering or brazing materials or for protective coatings;

(ii) Use any seamless steel tubing, except (a) to form integral fin tubing, or (b) that which has been made into return bends but only if the radius thereof is less than 1½ times the outside diameter of such tubing and the straight extensions thereof are not longer than two times the outside diameter of such tubing; or

(iii) Use any steel tubing (other than integral fin tubing) of wall thickness greater than the following:

Outside diameter of tubing	Wall thickness (inches) Maximum
(a) Up to and including ⅜"	0.028"
(b) Over ⅜" up to and incl. ½"	.035"
(c) Over ½" up to and incl. ¾"	.049"
(d) Over ¾" up to and incl. 1"	.065"
(e) Over 1" up to and incl. 1¼"	.083"
(f) Over 1¼" up to and incl. 2"	.095"
(g) Over 2" up to and incl. 2½"	.120"

(2) In the manufacture of any coil or tube assembly for air-cooled condensers no producer shall (i) except for use aboard ship, use finned tubing (other than integral fin tubing) having an average fin thickness to the nearest U. S. standard gauge in excess of 4% of the fin height, or a maximum of 0.023", whichever is smaller:

(ii) Except for use aboard ship, use a metallic protective coating (other than paint) where a mechanical fin bond is employed;

(iii) Use a protective coating containing more than 7% tin where a metallic fin bond is employed;

(3) In the manufacture of any coil or tube assembly for water-cooled condensers, no producer shall, except for use aboard ship (i) use more than 7 lbs. of non-ferrous metals per condensing unit nominal hp. for all self-contained refrigeration condensing units;

(ii) Use more non-ferrous metals per ton of refrigeration, for other than self-contained condensing unit condenser assemblies, than the following:

Seven pounds per ton of refrigeration for systems having saturated refrigerant vapor suction temperatures above 30° F.

Eight pounds per ton of refrigeration for systems having saturated refrigerant vapor suction temperatures from 0° to 30° F., inclusive.

Nine pounds per ton of refrigeration for systems having saturated refrigerant vapor suction temperatures below 0° F.

"Ton of refrigeration," as here used, means the removal of heat, at the low side, at the rate of 12,000 B.t.u. per hour. Total tons to be based on the design operating load of the low side connected to the condensing unit or units with which the condenser is used.

(4) In the manufacture of any coil or tube assembly for evaporatively cooled condensers, no producer shall (i) use finned tubing (other than integral fin tubing) having an average fin thickness to the nearest U. S. standard gauge in excess of 4% of the fin height, or a maximum of 0.023", whichever is smaller; or

(ii) Use a combination protective coating and metallic fin bond containing more than 7% tin.

(5) In the manufacture of any cooler coil or tube assembly for air-cooling, no producer shall, except for use aboard ship in connection with food storage (i) use a metallic protective coating containing more than 7% tin: **Provided, however,** that when the coil is used in food storage and the air passing over the coil is in direct contact with the food, the foregoing shall not prohibit a hot-dipped galvanized coating or a coating containing not more than 35% tin; or

(ii) Use finned tubing (other than integral fin tubing) having an average fin thickness to the nearest U. S. standard gauge in excess of 4% of the fin height, or a maximum of 0.023°, whichever is smaller.

(c) **Applicability of order.** (1) The required specifications established by paragraph (b), shall not prohibit:

(i) The production, fabrication, delivery, acceptance, or installation of coil or tube assemblies, the plans of which have already been drawn and accepted by or for the account of the Army or Navy of the United States, the Maritime Commission, the War Shipping Administration, or Lend-Lease countries, or

(ii) The use in the production or fabrication of, or the delivery, acceptance, or installation of any of the following materials in a producer's possession or control or in transit to a producer on the effective date of this Schedule III:

(a) Steel tubing.

(b) Coil or tube assemblies which on said date were in finished form or the parts for which had on said date been cast, machined or otherwise processed in such manner that the manufacture of such assemblies in conformance with this Schedule III would be impractical.

Issued this 2nd day of September, 1942.

†7 F.R. 5081, 5082, 5083, 6163.

Carrier Installations in Armour Plant Help Cut Shrinkage of Ham & Bacon

SYRACUSE, N. Y. — "Processed porkers," the name for eight new smokehouses installed by the Carrier Corp. at the "Heart of America" plant of the Armour chain in Kansas City, have put a stop to excess shrinkage and other losses in ham and bacon, the Armour management states.

As a result of controlled temperatures and humidity, the "processed porker" can be counted on to yield a standard amount of various cuts.

The better production of sausage in five sausage smokehouses is listed by Armour as being among the more important results of the Carrier installation. One of these smokehouses is refrigerated to low temperatures for more even coloring and temperatures of thuringer, salami, and other highly spiced cold sausages.

Space Saved in Restaurant by Putting 5 Compressors on Single Platform

DENVER, Colo. — Unusual space economy in compressor installation, as well as versatility in providing a dozen different temperatures are features of the installation made at Salimans Paradise Restaurant here by the A to Z Refrigeration Service Co., Frigidaire commercial refrigeration dealership.

The new restaurant, seating 220 people, located in the heart of the "gold belt" of old time pioneer Denver days, is a combination bar and restaurant, specializing in sea foods, salads and fine mixed drinks. Basement space conditions were such that all refrigeration had to be installed in an absolute minimum of space, and the nature of the food specialties offered by the restaurant demanded that at least eight constantly-controlled temperatures of various degrees had to be maintained.

George H. Gorman, president of the company, installed five compressors to serve 11 refrigeration needs in the basement on a heavy white pine wooden bench. The bench is 22 ft. long by 3 ft. wide, and raised 32 inches off the floor.

Five compressors are spaced two feet apart along its length, conveniently arranged for service, adjustments, etc., and occupying one side of a narrow corridor which was the only area not used for food storage. Compressors include three 1-hp. units, and two ½-hp. units.

One 1-hp. machine provides water cooling, another 1-hp. unit supplies blower-diffused cold for a 19 x 8 x 7-ft. walk-in refrigerator divided into two compartments, and another 1-hp. unit serves one wall box reach in refrigerator in the kitchen. One ½-hp. unit serves the backbar and another ½-hp. job a steam table cold plate, and an ice cream five-hole unit on the upper floor.

The first 1-hp. machine provides four temperatures, by means of three snap action valves, and one direct expansion valve. A butter box on the first floor is cooled to 38° F., a vegetable cooler to 45° F., and a salad case in which salads are kept on display to 42°, and a backbar dry bottle box for beer and wines to 36°.

The dry bottle box is connected directly to the compressor, via a direct expansion Alco valve. Another 1-hp. unit, connected with a diffused blower in the walk-in cooler, has a solenoid control, and a thermostat control mounted inside the room itself. This unit also provides two temperatures, 38° for the meat box, and 34° for the large 50-case beer cooler in the basement. The beer cooler, incidentally, is of the visible type, allowing bar customers to see into the basement where kegs are chilled.

All valves and controls for the five compressors are mounted on a convenient board above the bench, except for the solenoid control in the walk-in refrigerator. This makes control and operation simple, and has made the job one of the simplest of the type yet installed in the Rocky Mountain area. The installation amounted to $7,000, but was installed in the short space of three days by a crew of five refrigeration service men.

Armstrong Cork Co. Nets $1,405,003 in First Half; Tax Reserve $3,924,319

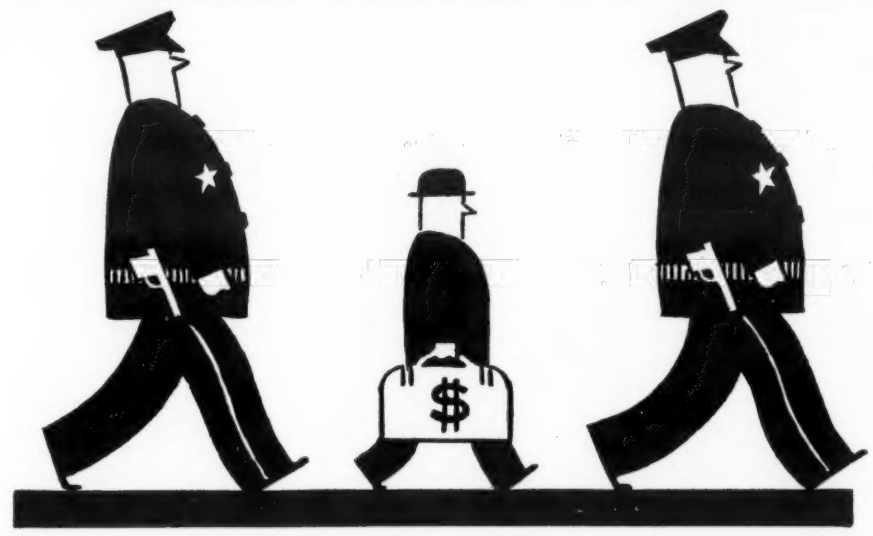
LANCASTER, Pa. — Armstrong Cork Co. made a net profit of $1,405,003, for the first six months of 1942, or $5,333,093 before reserves for Federal income and excess profits taxes totaling $3,924,319, H. W. Prentis, Jr., company president, stated in his semi-annual report to stockholders.

This net profit compares with $2,492,942, or $5,390,691 before Federal taxes totaling $2,918,749 for the corresponding period in 1941.

Domestic earnings per share of common stock for the first half of this year were $.92 as compared with $1.69 in 1941. Domestic sales totaled $40,707,705, an increase of 9% over sales of $37,481,591 in the comparable period in the previous year.

Employment figures for the company in the United States of June 30, 1942 reached a new high—12,326 as compared with 10,544 on June 30, 1941. The company's foreign subsidiaries employed 2,475 as of the same date.

Domestic wages and salaries for the first half of the year rose from $8,974,168 for the corresponding period in 1941 to $11,322,091, an increase of 26%.



Let's Protect What We Have ★ ★ ★

★ Of more practical use than all the gold at Fort Knox is the refrigeration equipment now serving our country. Because the health and stamina—the very life—of our fighting men, the workers in our industries, our whole population—are dependent to a considerable degree, upon this equipment.

So let's be sure to protect what we have. Because of the urgent need for critical materials the equipment now in existence must be made to last, to serve as long as possible. It's the war-time job of every one in the refrigeration industry to do everything possible to conserve that equipment. It's a challenge not only to our patriotism but to our skill and ingenuity as well.

As manufacturers we have pledged to do our part—to fulfill these six objectives of the industry Program for Victory:

1. Avoid every waste of essential materials and supplies.
2. Make the most of existing equipment.
3. Collect reclaimable metal for wartime use.
4. Reduce the number of models now being produced.
5. Release vital war metals by finding substitutes.
6. Co-operate in all possible ways with governmental agencies in conserving equipment, material and power.

Automatic refrigeration controls must be skilfully and thriftily serviced. When they cannot be made to function efficiently they may be replaced. Under established priority rules, Penn is prepared to supply efficient, dependable controls for those that need to be replaced. *Penn Electric Switch Co., Goshen, Indiana.*

PENN CONTROLS

REFRIGERATION, AIR CONDITIONING, ENGINE, HEATING, PUMPING AND AIR COMPRESSOR

Complete All-Industry Commercial Refrigeration and Air Conditioning Sales For 1941 and the First 6 Months of 1942

SALES—1941 Number of Units	SALES—1941 Dollar Volume*	Products	SALES—6 MOS. 1942 Number of Units	SALES—6 MOS. 1942 Dollar Volume*	END USE DATA—1942 Government Agencies	END USE DATA—1942 War Plants	END USE DATA—1942 Civilian
442,763	33,543,305	CONDENSING UNITS—below 3 hp.....	100,494	6,895,460	37%	26%	37%
5,821	3,115,300	CONDENSING UNITS—3 hp. to but not including 15 hp.	7,221	4,733,186	51%	29%	20%
2,570	4,276,055	CONDENSING UNITS—15 hp. to 100 hp. inclusive(*) (See Chart on Page 7)	1,504	3,776,872	50%	29%	21%
170	769,500	CONDENSING UNITS—over 100 hp.....	100	1,211,590	40%	25%	35%
14,700	5,760,000	MILK COOLERS	9,675	3,140,000	..	..	100%
155,000	522,350	FOOD STORAGE LOCKERS.....	125,000	420,250	..	..	100%
64,300	24,550,000	FOOD STORAGE Cases, Cabinets, and Coolers..... (See Chart on Page 18)	27,656	10,743,295	36%	..	**64%
...	...	WATER COOLERS (all types)..... (See Chart on Page 19)	34,311	2,822,278	49%	34%	17%
78,300	12,100,000	ICE CREAM CABINETS	15,690	1,495,600	19%	17%	64%
119,610	9,672,270	BEVERAGE COOLERS	7,651	1,224,200	22%	62%	16%
689	2,119,910	ICE MAKING EQUIPMENT	999	1,837,108	60%	25%	15%
38,866	9,497,250	SELF-CONTAINED AIR CONDITIONERS—½ to 25 hp.	17,505	4,268,741	61%	22%	17%

*Dollar volume figures are given at factory prices. **Includes war plant installations. (*)Including evaporative condenser and water-cooled condenser.

ALL IS NOT "MUSIC" IN THE TROPICS

Today the romance and tranquility of the South Seas take a back seat to stark reality. War has come to the tropics—modern war with all of its ferocity and devastation. To eradicate the "yellow peril" that brought it on, free men are gathering in mighty force to eventually deal the crushing blow and to bring peace again to a peaceful people. Back of this untiring effort is good, wholesome food, preserved in all of its natural freshness by nationally known refrigeration plants in which are installed UNIVERSAL COOLER REFRIGERATION UNITS. This is going on in canteens—aboard fighting ships—or in portable field kitchens the world over. For UNIVERSAL COOLER is one hundred per cent behind our fighting forces today.

Universal Cooler Corporation, Marion, Ohio, U.S.A.

HOME OF

Universal Cooler

REFRIGERATION UNITS

AUTOMATIC REFRIGERATION SINCE 1922

Universal Cooler of Canada Ltd., Brantford, Ontario

Greusel Heads WPB Office in Milwaukee

MILWAUKEE — Frank Greusel, president of Greusel Distributing Corp., veteran appliance distributor here, has been appointed new manager of the Milwaukee War Production Board district, covering Milwaukee, Racine, Kenosha, Walworth, Waukesha, Washington, Ozaukee, and Sheboygan counties.

Mr. Greusel will supervise contract, priorities, salvage, and other programs in the Milwaukee district. He has turned over personal direction of his appliance distributing firm to others in the organization.

Mr. Greusel, in addition to taking an active part in trade association and cooperative work, has also been a civic leader, having taken a leading role in many local civic improvement movements.

Strawn Directs Detroit WPB Inventory Branch

DETROIT—C. W. Strawn, vice president of Bliss Strawn Distributor Co., appliance firm, is manager of the new Inventory and Requisitioning Branch of WPB for Detroit, it has been announced here.

Regional functions of the new branch will be similar in nature to the Inventory and Requisitioning branch of WPB in Washington. It serves the war effort by locating "frozen" and idle inventories of critical war material.

Mr. Strawn has been in the appliance business for many years, and was once a sales executive for Stewart-Warner Corp.

Powers Manages Pacific District for Westinghouse

EAST PITTSBURGH, Pa.—R. E. Powers, formerly of Chicago and New York, has been named Pacific Coast district manager of the manufacturing and repair department, Westinghouse Electric & Mfg. Co. Announcement of the appointment was made by H. F. Boe, manager of the company's district manufacturing and repair organization.

Mr. Powers goes to Emeryville, Calif., from Chicago, where he has served as manager of the manufacturing and repair department of the Westinghouse northwestern district for the past four years. On the Coast he will have charge of all activities of his department in a territory comprising all or parts of 11 western states, Alaska, and the Hawaiian Islands.

Schuler, Robinson Join G-E Public Relations Staff in New York

NEW YORK CITY.—Public relations section of the General Electric Co. here, has acquired Stanley C. Schuler, former associate editor of the "House Beautiful" magazine, and Edward L. Robinson, previously with the publicity department of G.E. in Schenectady.

Mr. Schuler has previously been associated with the Birmingham, Ala., "Post" and with the McGraw-Hill Co. in San Francisco, in an editorial capacity, before joining Hearst Magazines, Inc., in 1939.

He succeeds Lieut. William H. Dinsmore, now active in service with the U.S. Navy, as general assistant to K. G. Patrick, who is in charge of the office.

Mr. Robinson has been appointed New York publicity representative of the G. E. radio, television, and electronics department, and will be responsible for this department's contacts with newspapers and magazines. In this capacity Mr. Robinson will also be associated with the company's New York public relations section.

Army, Navy 'E' Pennant Goes to Electromaster

DETROIT — "E" pennant of the Army and Navy for high achievement in production was given to Electromaster, Inc., manufacturers of electric cooking equipment, one of the first companies to receive this honor.

R. B. Marshall, president of Electromaster, made particular note of the fact that this definitely establishes the eligibility of small as well as large enterprises to receive such honors.

"Electromaster has on its payroll less than 300 employes. In singling it out as one of the very few firms to be given this single honor, our Army and Navy let it be known that the size of the enterprise has little if any bearing on its rating in the eyes of the Services."

Jacksonville WPB Division Headed by Waterman

TAMPA, Fla. — J. S. Waterman, who managed the major appliance departments for Maas Bros., here, one of the South's largest department stores, is now manager of the War Production Board's Production Division in the Jacksonville, Fla. area.

Contract Production Control Plan Being Tried Out by WPB

WASHINGTON, D. C.—"Contract production control," an experimental plan for budgeting the use of materials by prime war contractors, is being tried out by the War Production Board.

If successful, this plan will be incorporated into the board's general program for controlling the flow of materials.

Its principal feature is the setting up of a complete budget of materials and parts required to fulfill a prime war contract. The prime contractor obtains from all his subcontractors on a specified form (CPC-2) information which will show materials and requirements and a proposed shipping schedule for the parts which the subcontractor will supply.

These reports will be assembled by the prime contractor on Form CPC-1, together with a statement of his own materials requirements and a production schedule of parts he will make himself, and submitted to the contracting agency.

Preference ratings will be assigned to the approved deliveries of materials and parts and applied in the usual manner. It will be the intention to assign ratings high enough so deliveries should be neither earlier nor later than necessary to fulfill the contract delivery dates.

In order to avoid duplicating authorizations to purchase materials under the production requirements plan, firms operating under both plans are required to deduct materials authorized under contract production control from those authorized on four-quarter PD-25A and PD-25F forms.

Wife of J. Carl White Dies in Phoenix

PHOENIX, Ariz. — Mrs. Alice White, wife of J. Carl White, president of the J. Carl White Co. here, distributor of refrigeration and air conditioning supplies, died here Aug. 18 after an illness of several months.

Mrs. White, who was widely known among industry members in the southwest, was active in civic affairs in the Valley of the Sun, and had just led the Frank-Luke-John C. Greenway Post Auxiliary of the American Legion to its most successful year, the organization becoming the third largest of its kind in the nation.

Mrs. White is survived by her husband, and a son, Herschel.

Dealer Has to Shoulder Cost Of Refrigerator Warehousing

(Concluded from Page 1, Column 4)

(2) A formula establishing base prices for distributors' sales to purchasers other than dealers, and

(3) A method by which manufacturers may average their warehouse allowances instead of computing the warehousing cost for each refrigerator separately.

Restrictions on sales of household refrigerators were frozen by the War Production Board on Feb. 11, and on April 30 manufacture was halted.

WAREHOUSING ALLOWANCE

The warehousing allowance covers such costs as warehousing, handling, financing and insurance incurred between Feb. 14 and Sept. 13.

The amendments provide that on sales to the ultimate consumer where the distributor obtained possession of the refrigerator after Sept. 9, the warehousing allowance will be borne one-fifth by the manufacturer, one-fifth by the distributor, and three-fifths by the dealer. The retail price remains unchanged. A manufacturer selling directly to the ultimate consumer must absorb the warehousing allowance in full.

On sales to the ultimate consumer where the distributor obtained possession before Sept. 9, the distributor must absorb one-fourth of the warehousing allowance and the dealer three-fourths. A distributor selling directly to the ultimate consumer must absorb the warehousing allowance in full.

Dealers are forbidden from adding to their prices in sales to ultimate consumers any of the warehousing allowance passed on to them by distributors.

The warehousing allowance, as granted to manufacturers in a previous amendment, was determined by adding 1% of the base price for each month that the refrigerator was ready for delivery and unsold after Feb. 14.

The amendments revise this method and provide a cut off date so that manufacturers and distributors cannot add costs incurred for the period after Sept. 13, 1942.

The alternative method by which manufacturers may compute the amounts which may be added to their prices is set forth in the amendment to Revised Price Schedule 102, as follows:

(1) Divide the total number of days each refrigerator has been ready for delivery since Feb. 14 by the total number of refrigerators.

(2) The resulting number of average days may be assessed against each refrigerator for the period between Feb. 14 and Sept. 13, at the rate of four-fifths of 1% for resale to ultimate consumers, or 1% for sale direct to wholesale consumers.

Instead of applying the warehousing allowance by separate calculation for each refrigerator, this method allows a uniform rate of assessment against all stock held by the manufacturer. It avoids differences in the prices of identical boxes to the consumer, depending upon how long each had been stored.

In effect the price of refrigerators sold by manufacturers will be increased 1% or four-fifths of 1%, whichever is applicable, of the base price per month. Because of the cut-off date the increase in price can be no more than 7% in sales to wholesale consumers and 5.6% in sales to distributors for resale to ultimate consumers.

On sales to wholesale consumers, as defined by the amendment to Maximum Price Regulation No. 110, distributors are allowed to pass on the additional 1% of the manufacturers' base price for every month the refrigerators purchased remained in frozen inventories (between Feb. 14 and Sept. 13.)

The proportions used in distributing the extra warehousing costs among the manufacturers, distributors and dealers, were based on the relative per unit gross margins on the sale of the household refrigerators. The burden of absorbing the greater portion of these costs by the dealer will be lessened because of the fact that most refrigerators freed from restrictions are high-priced or deluxe models which have a higher than average percentage and dollar margins, and because increased demand has resulted in a reduction of selling expenses. Moreover, Regulation W of the Federal Reserve Board, by requiring large down payments, has reduced the dealer's risks and interest costs on installment sales.

INVOICE INFORMATION

Distributors and manufacturers, when selling to dealers, are required to include on the invoice or bill of sale the following statement:

"The warehousing charge shown on this invoice . . . is added to the price charged with the permission of the Office of Price Administration . . . This amount represents your proportionate share of the increased warehousing costs which have accrued because of the War Production Board action freezing new refrigerator stocks. We have already absorbed our proportion of the extra warehousing costs. Maximum Price Regulation No. 110, which established your ceiling for the retail sale of this refrigerator, does **not** allow you to add this increased cost to the ceiling price."

The amendment establishes base prices for classes of purchasers other than dealers to whom the distributor made sales in the past. In such cases the base price is the highest net price in effect in the two months preceding Feb. 2, 1942. On sales to new classes of purchasers the maximum mark-up allowed on the distributor's landed cost is 20%.

Questions & Answers On Warehousing Costs

WASHINGTON, D. C. — A series of questions and answers interpreting two amendments to refrigerator price regulations have been made available to dealers, distributors, and manufacturers of new household mechanical refrigerators by the OPA.

The questions and answers cover those provisions of Amendment No. 4 to Revised Price Schedule No. 102 and Amendment No. 4 to Maximum Price Regulation No. 110 which establish methods for computing warehousing allowances in sales of refrigerators allowed by the War Production Board. The amendments will be effective Sept. 9.

The questions and answers follow:

1. Q. What do the new amendments to the OPA household refrigerator orders provide?

A. These amendments set up a method for taking care of the warehousing and handling costs due to the War Production Board "freeze" of new household refrigerator stocks. Manufacturers are allowed a simplified method of billing this allowance, and dealers' invoices will carry a note of explanation. Formulas for base prices are also provided for distributors' sales to wholesale consumers.

2. Q. What is an "ultimate consumer" and what is a "wholesale consumer" as defined by the amendments?

A. An "ultimate consumer" as defined by the amendments is a person who purchases a refrigerator for use in his own home. He would therefore correspond to the ordinary retail consumer.

A "wholesale consumer" is a person who does not purchase for resale, and who does not fall within the category above for the "ultimate consumer." He would most closely correspond to what is known in the trade as the "wholesale buyer," such as a builder, or a real-estate management company.

3. Q. Is the monthly warehousing allowance which was set up by Amendment No. 1 to Revised Price Schedule No. 102 to be continued? Is it to be extended to distributors?

A. The monthly warehousing allowance is to be extended to manufacturers and distributors; but its assessment is to cease on Sept. 13, 1942.

4. Q. Does this mean that no additions may be made to the price of refrigerators sold after Sept. 13?

A. No. If the provisions of Amendment No. 4 to Revised Price Schedule 102 or Amendment 4 to Maximum Price Regulation 110 entitle the seller to add an allowance for warehousing, he may add this on any sale in the future during the effective life of these amendments, but the amount he may add is to be calculated on the basis of the period through Sept. 13 only.

5. Q. When can a manufacturer make additions to his price for the warehousing allowance?

A. A manufacturer may make additions to his price for the warehousing allowance when selling to a distributor or to a dealer for resale. He may make additions when selling direct to a wholesale consumer. But he may **not** charge the allowance if he sells direct to an ultimate consumer.

6. Q. What is the amount of the additions that a manufacturer may make?

A. A manufacturer, when selling to a distributor or dealer for resale to an ultimate consumer, may add four-fifths of 1% to his price for each month or fraction of a month that he had the refrigerators ready for delivery but not sold between Feb. 14 and Sept. 13, 1942.

If he sells to a distributor or to a dealer for resale to a wholesale consumer or to a wholesale consumer direct, he may add to his price for the period mentioned above at the rate of 1%.

7. Q. When can a distributor make additions to his price for the warehousing allowance?

A. A distributor may make additions to his price when selling to a dealer for resale. He may also make additions when selling direct to a wholesale consumer but **not** when selling direct to an ultimate consumer.

8. Q. What is the amount of the additions that a distributor may make when selling in the cases specified in the answer to Question 7?

A. When selling direct to a wholesale consumer or to a dealer for resale to a wholesale consumer, a distributor may add 1% of the manufacturer's price for each month or fraction of a month that elapsed from the date that the manufacturer first had the refrigerator ready for delivery, and the time that the distributor sold the refrigerator. However, he may include only the months that fall between Feb. 14 and Sept. 13, 1942.

If a distributor is selling to a dealer for resale to an ultimate consumer, the amount he may add depends on whether or not the refrigerators sold were in his possession before the effective date of these amendments. If they were in his possession before the effective date of these amendments, he may add to his price at the rate of ¾ of 1 % for the period mentioned above. If the refrigerators came into his possession on or after the effective date of these amendments he may add to his price at the rate of three-fifths of 1% for the period mentioned above.

9. Q. May a dealer add to his price to cover the increased cost to him of the warehousing allowance?

A. A retail seller is not allowed, in any instance, to add anything to the maximum retail price previously set up by Maximum Price Regulation No. 110. When selling to him, his distributor or manufacturer is required to state on the invoice:

"The warehousing charge shown on this invoice . . . is added to the price charged with the permission of the Office of Price Administration. . . . This amount represents your proportionate share of the increased warehousing costs which have accrued because of the War Production Board action freezing new refrigerator stocks. We have already absorbed our proportion of the extra warehousing costs. Maximum Price Regulation No. 110 which establishes your ceiling for the retail sale of this refrigerator does **not** allow you to add this increased cost to the ceiling price."

WPB Contracts Branch Gets 'Dissolve' Order

WASHINGTON, D. C. — Dissolution of the Contracts Distribution Branch of the WPB, effective Sept. 15, was ordered Sept. 2 by top WPB officials.

Employes of the Branch's head office in Washington have been given notice that their "services will be terminated."

It is rumored that the move was part of Chairman Donald M. Nelson's "get tough" campaign, and that the Branch was possibly considered no longer necessary because of the creation of the Smaller War Plants Corp.

The more than 100 field men established in offices of the Branch around the country will probably not be affected, since they are for the most part incorporated into WPB's regional organization.

The Branch was once one of the main divisions of the old OPM, and was charged with aiding small shops and plants throughout the country to get sub-contracts for "bit and pieces" in the armament program.

PAN-AMERICAN AIRWAYS SPECIFIES

LINDSAY STRUCTURE

for Tropical Refrigerator-Buildings

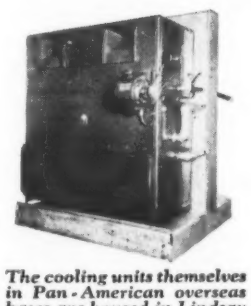
Last year, to keep food fresh for pilots and men, Pan-American Airways ordered a number of refrigerator-buildings for new bases in tropical zones around the world.

The need for zero temperatures inside with 130° outside—the humid climate—the lack of skilled workers for the erection of the buildings—and limited shipping space for the material all provided serious problems. But Pan-American engineers, working with Chrysler Airtemp and Shaer & Turner Engineering Company, found the solution in Lindsay Structure.

Light-weight Ls "prefabricated" steel buildings—cut to specifications—shipped knocked down—required less shipping space. Skilled workers were not necessary—the simple Lindsay Structure "Meccano set" assembly was done by the natives. The double-wall Lindsay Structure buildings, with 8" of Dry-Zero Insulation, sealed out heat and moisture. Buildings 75' x 21' were erected in three weeks each, by fifteen unskilled natives and one white supervisor. After months of service, inspection shows that the operation is even more efficient than anticipated.

This year Pan-American has already ordered nine additional refrigerator-buildings—and again specified Lindsay Structure.

In countless applications Lindsay Structure provides unusual strength and lightness, with worth while savings in time and steel. Write for information. Lindsay Structure Division, Dry-Zero Corporation, 242 North Bank Drive, Chicago.



The cooling units themselves in Pan-American overseas bases are housed in Lindsay Structure. Another application of widespread Ls use.

Illustration showing method of Lindsay Structure assembly. Put together with only simple wrenches!

Ls
REG. U. S. PAT. OFF.

LINDSAY STRUCTURE

U. S. Patents 2017629, 2263510, 2263511
U. S. and Foreign Patents Pending

LINDSAY STRUCTURE CAN SAVE THOUSANDS OF TONS OF STEEL PER MONTH

Air Conditioning & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

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Refrigeration Will Help
Win the War

Concentration of Industry

ANNOUNCEMENTS by Donald Nelson that Henry Dinegar and Dr. Arthur Brown have returned from England where they studied industry concentration (limiting the production of civilian articles to a few plants) have evoked some harried brow-furrowing among a few manufacturers in this industry.

"Where will I stand?" they want to know.

Nobody can answer that question definitely, of course. But what question can be answered definitely these days? Before individual manufacturers begin to worry about their own status, it first must be determined whether or not a particular industry, or segment of that industry, needs to be concentrated.

PRESENT AGENDA OF INDUSTRIES FOR CONCENTRATION

First industries on the agenda for concentration, we are informed, include: agricultural machinery, dairy machinery, business machines, construction equipment, highway machinery, oil burners, plumbing and heating supplies (including warm air furnaces), bicycles, toys, bedding, portable conveyors, railroad cars, sugar refining equipment, milk cans, boilers, pots and pans, cork products, unit heaters, furniture, cutlery, silverware, and paper products.

So far, we learn, refrigeration is not on the agenda. It is today mainly a war industry, rather than a civilian industry.

This does not apply to household refrigeration, which is at the moment out of the picture. Last January the NEWS predicted a "Victory" model household refrigerator, to be produced by one or two small manufacturers. Donald Nelson himself had told us it was in the cards. It didn't materialize, because household refrigerator inventories turned out to be much larger than expected.

If the war lasts long enough, however, the plan will be revived.

As to commercial refrigeration, it is entirely possible that eventually some application of the idea may be applied to certain units manufactured largely for civilian uses. Many months will pass, we are told, before such action will probably be taken.

Parts manufacture seems much less susceptible to concentration. Most parts manufacturers are heavily loaded with army and navy orders, and their civilian production simply means a little extra run-off from their lines. Also, many parts manufacturers are specialists.

TREND OF WAR THIS YEAR WILL DETERMINE FUTURE

One can not be sure these days of any predictions of this nature, because there are so many conflicting forces at work within the War Production Board itself; and decisions made one day are liable to be reversed later when a new crop of officials emerge "topside."

A great deal also depends on the progress of the war this summer and fall. As matters stand now, nevertheless, the concentration of industry program does not appear to pose immediate problems for refrigeration.

As things are going now, the industry is likely to achieve "concentration" voluntarily before it will be necessary for the government to "crack down." In many lines of refrigeration and air conditioning products, allowable production is insufficient for larger producers to contine to operate profitably, and they are relinquishing the field to smaller manufacturers. This trend will no doubt continue.

SMALL MANUFACTURERS HAVE PLENTY OF ORDERS ON HAND

Another consideration is that many of the smaller manufacturing concerns were among the first to land war orders, and have done such a good job that they have been given more and more orders for Army-Navy-Maritime refrigeration equipment. Some of them have backlogs which will require capacity operation for more than a year.

In view of the rapid expansion of the Armed forces predicted for the next 10 months(toward an eventual army of 10,000,000 men or even more), plus the planned occupation of more and more foreign territory by our forces—requiring refrigerated storage facilities for the occupying personnel—it is now being predicted that Army-Navy refrigeration requirements for the coming year may be upped by as much as 40%.

SOME CONVERTED FIRMS MAY HAVE TO SWITCH BACK

If this comes to pass, it may be necessary for some of the larger manufacturers who have already converted production lines to war materiel to resume manufacture of refrigerating machinery. Soldiers must be fed, of course, before they can shoot.

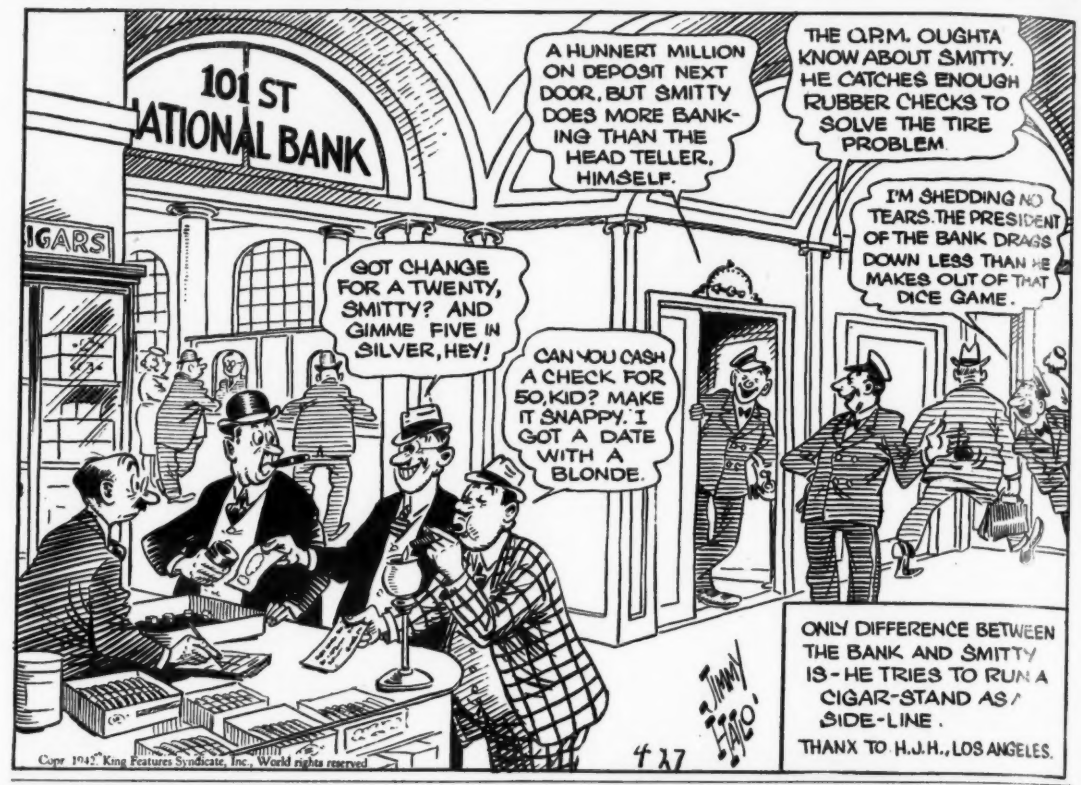
An interesting footnote to this discussion is the case of the WPB's Henry Dinegar. When it was first reported that Mr. Dinegar had gone to England to study concentration-of-industry, some people in the industry erroneously assumed that because he was so familiar with the refrigeration industry, he'd probably start with it as the Number One guinea pig in the concentration program.

(We say that this was an erroneous assumption because Mr. Dinegar's well-known fair-mindedness would preclude any betrayal of the best public interest for his own convenience.)

The "interesting footnote" is that it now appears as if Mr. Dinegar will not be assigned to the concentration work. He has proved to be so capable an administrator that he has had rapid advancement in the War Production Board, and when he returned he was given a personnel administration job that will require all his energies and talents. (Anyone familiar with the inner workings of the WPB knows that its personnel problems are acute and pressing.)

Readers should not infer from these remarks that concentration is "just a lot of talk. It's coming, and fast.

They'll Do It Every Time . . . . . By Jimmy Hatlo


101 ST NATIONAL BANK
CIGARS
GOT CHANGE FOR A TWENTY, SMITTY? AND GIMME FIVE IN SILVER, HEY!
A HUNNERT MILLION ON DEPOSIT NEXT DOOR, BUT SMITTY DOES MORE BANKING THAN THE HEAD TELLER, HIMSELF.
CAN YOU CASH A CHECK FOR 50, KID? MAKE IT SNAPPY. I GOT A DATE WITH A BLONDE.
THE O.P.M. OUGHTA KNOW ABOUT SMITTY. HE CATCHES ENOUGH RUBBER CHECKS TO SOLVE THE TIRE PROBLEM.
I'M SHEDDING NO TEARS. THE PRESIDENT OF THE BANK DRAGS DOWN LESS THAN HE MAKES OUT OF THAT DICE GAME.
ONLY DIFFERENCE BETWEEN THE BANK AND SMITTY IS - HE TRIES TO RUN A CIGAR-STAND AS A SIDE-LINE.
THANX TO H.J.H., LOS ANGELES.
JIMMY HATLO
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4 27

DEPOT HOTEL
WHY, LEO! WE'RE SO GLAD YOUR BUSINESS BROUGHT YOU TO OUR TOWN. YOU POSITIVELY MUST HAVE DINNER WITH US TONIGHT. WE'LL DRIVE DOWN AND PICK YOU UP ABOUT SIX-THIRTY.
OH, BOY! AT LAST! REAL HOME-COOKIN'!!
THIS POOR TRAVELING-SALESMAN'S TONGUE WAS HANGING OUT FOR A HOME-COOKED MEAL—
7-1
INSOMNIA HOTEL GRILL
GEE, BOY, WE'RE SORRY THIS IS THE MAID'S NIGHT OFF.
BUT YOU'LL LIKE THE FOOD HERE. BEST PLACE TO EAT IN TOWN.
GRILL
ERK
AND WHERE DID HIS FRIENDS TAKE HIM FOR DINNER? YOU GUESSED IT. THEY'LL DO IT EVERY TIME.
Thanx to "JEFF" JEFFERSON, LOS ANGELES.
JIMMY HATLO
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An extra cartoon is published this issue to make up for one omitted Aug. 31.

LETTERS

JOBBER PRESIDENT URGES IMMEDIATE ACTION TO GET MATERIALS TO REPLACE STOCKS

National Refrigeration Supply Jobbers Association
2222 Arch St., Philadelphia, Pa.

Editor:

The article in the Aug. 24 edition of the NEWS really deserves an official answer from our Association as the WPB official specifically refers to "suppliers."

I have been told by the WPB Distributors Branch that the majority of the jobbers in this country have used PD-1X applications more or less continually since they have been available. The Board is probably trying to give us sufficiently high ratings to secure material to replace that sold on A-3 to A-10 ratings.

For the past 30 days all jobbers have become seriously concerned with their inability to replace such rated orders. It appears as though we are selling ourselves out of business as our inventories are getting down continuously.

First it was copper which we sold on A-10 and could not replace without an A-1-k, which we cannot get on PD-1X. Then it was valves and fittings which are practically impossible to secure without the same rating. Then a number of expansion valve manufacturers were unable to fill our orders. Some of them even went so far as to write their jobbers that it would be impossible to fill their orders unless an A-1-k or higher rating was furnished. Very soon we were told the same thing applied to dryers and strainers. Recently gauges and Silica Gel became unavailable without an A-1-a or better rating.

The writer of the article in the Aug. 24 issue intimates that perhaps some of us have excessive total inventories. This may be true in a few cases particularly in the East at least where you cannot carry double the previous month's sales.

The PD-1X form is the only help that we jobbers have so it must be used, otherwise every jobber would have been out of business entirely long before this.

As I mentioned above, we are all very seriously concerned with the fact that we sell on one rating and when we go to replace the material or write in for a rating on PD-1X, we cannot get a rating high enough to replenish our stock. This is indeed serious in the case of dryers and expansion valves which are necessary service items.

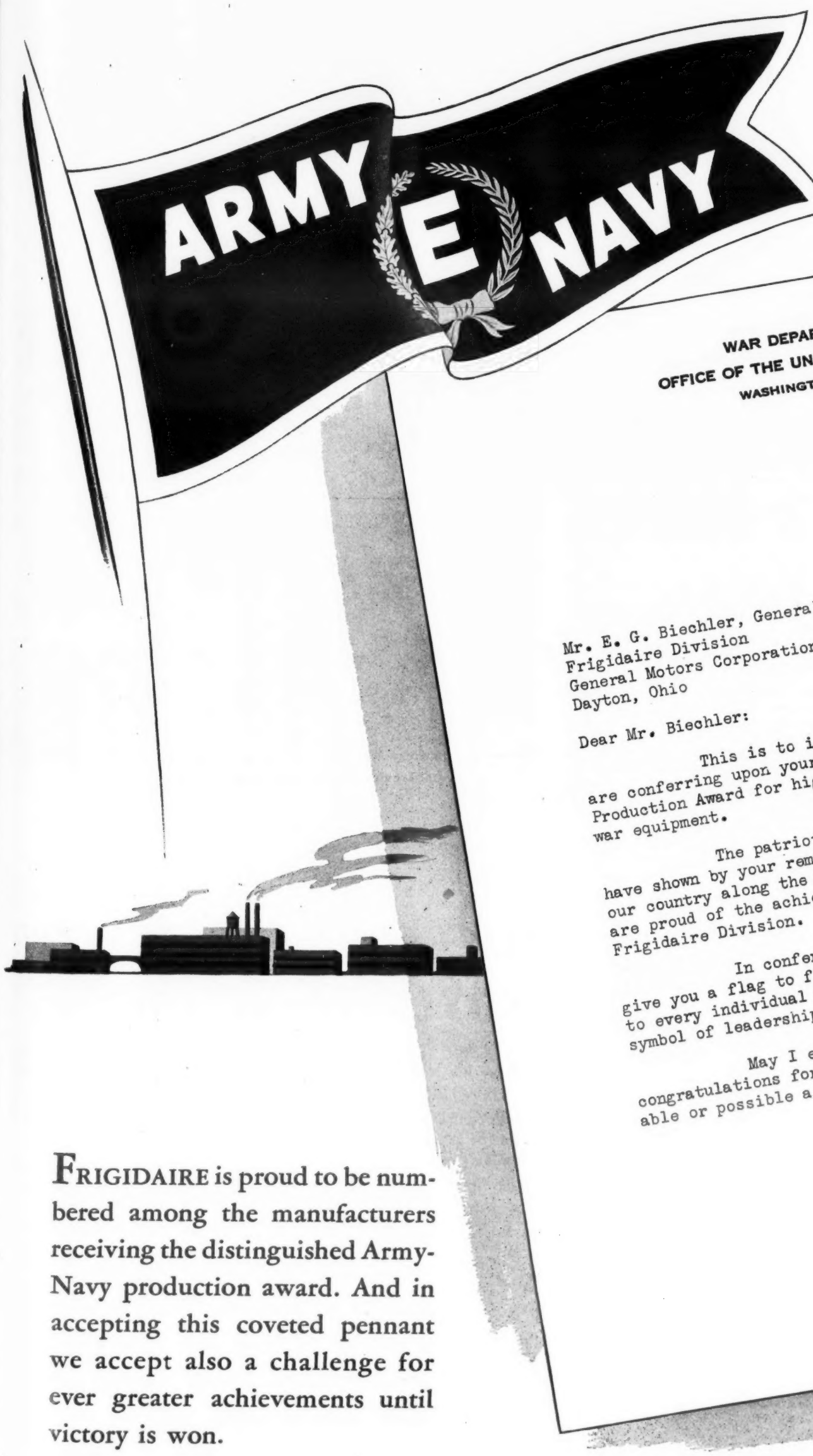
It isn't altogether the fault of WPB as they try to give the manufacturers high enough ratings to secure the necessary raw materials. Metals particularly are becoming more critical daily and in many cases the delivery to the manufacturer is six to eight months in the future.

I do not believe the stock bins of both manufacturers and jobbers have ever been as low as they are at this time. Fortunately the hot weather is about over, but there still will be thousands of machines shut down because no service man is available or the parts cannot be furnished.

It seems to us that someone in the government should sit down with a few manufacturers, jobbers, and service men to do some real planning for the emergency which will arise in the near future. Perhaps WPB officials can give us the answer to this.

ALEX H. HOLCOMBE, JR.,
President, National Refrigeration Supply Jobbers Association

"...for accomplishing more than seemed possible"



WAR DEPARTMENT
OFFICE OF THE UNDER SECRETARY
WASHINGTON, D.C.

August 22, 1942

Mr. E. G. Biechler, General Manager
Frigidaire Division
General Motors Corporation
Dayton, Ohio

Dear Mr. Biechler:

This is to inform you that the Army and Navy are conferring upon your organization the Army-Navy Production Award for high achievement in the production of war equipment.

The patriotism which you and your employees have shown by your remarkable production record is helping our country along the road to victory. The Army and Navy are proud of the achievement of the men and women of the Frigidaire Division.

In conferring this award, the Army and Navy will give you a flag to fly above your plant, and will present to every individual within your organization a lapel pin, symbol of leadership on the production front.

May I extend to the Frigidaire Division my congratulations for accomplishing more than seemed reasonable or possible a year ago.

Sincerely yours,

Robert P. Patterson
Under Secretary of War

FRIGIDAIRE is proud to be numbered among the manufacturers receiving the distinguished Army-Navy production award. And in accepting this coveted pennant we accept also a challenge for ever greater achievements until victory is won.

FRIGIDAIRE AT WAR

FRIGIDAIRE DIVISION • GENERAL MOTORS CORPORATION • DAYTON, OHIO

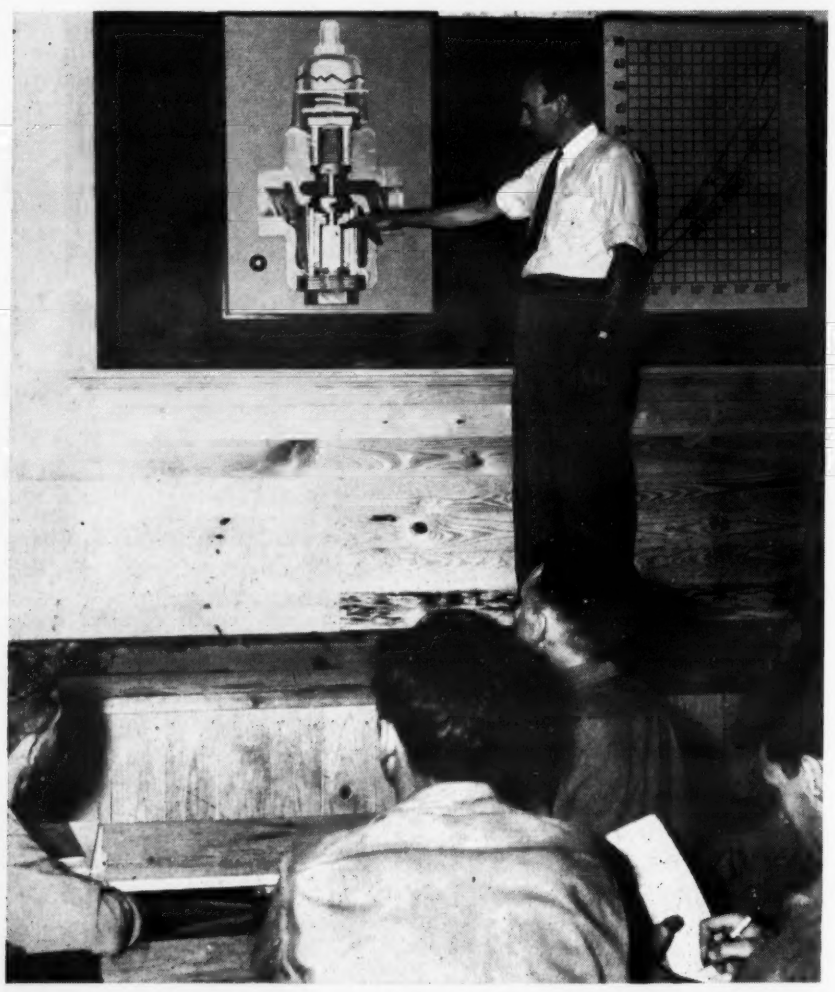
Army Refrigeration School at Camp Lee Teaches Men To Service Any Kind of System, Anywhere

EDITOR'S NOTE: Private George E. Toles, before going into the army, wrote many a story for AIR CONDITIONING & REFRIGERATION NEWS as a free lance correspondent in the Buffalo area. He is attached to the public relations office of the Quartermaster Replacement Training Center at Camp Lee, Va., and has written this account of the refrigeration training school at the NEWS' request.

By Pfc. George E. Toles

CAMP LEE, Va.—One of the first objectives of the Jap army in its assault on Bataan was the cold storage plant of the American forces. Destruction of that unit was a serious blow to the army of General Douglas McArthur because it meant the end of preserved foods, particularly meats.

That's why refrigeration is playing such an important role in World War II. And the Refrigeration School at Camp Lee's Quartermaster Replacement Training Center is doing an outstanding job in preparing Quartermaster soldiers to care for the Army's refrigeration needs the world over.



Large demonstration models or pictures of the same, like the water valve being demonstrated by Civilian Instructor Leonard K. Wright, are a big aid in teaching.

This is a war of movement. Food must go where the troops go and that food must be properly preserved—both in transit and after it arrives. Refrigeration must do the job, on land and sea. Refrigeration is a highly specialized science. It calls for well-trained men. The Refrigeration School here has been turning out these highly skilled technicians in ever increasing numbers for more than a year.

The Refrigeration School is a unit in the Supply Training Division directed by Col. John V. Rowan, under command of Brig. Gen. Guy I. Rowe, commander of the training center. Capt. Allan Johanneson is head of the school. He is a former maintenance engineer for a chain of ice, meat curing and storage plants in Florida. Serving as civilian instructor is a well-known educator in the refrigeration field—Leonard K. Wright.

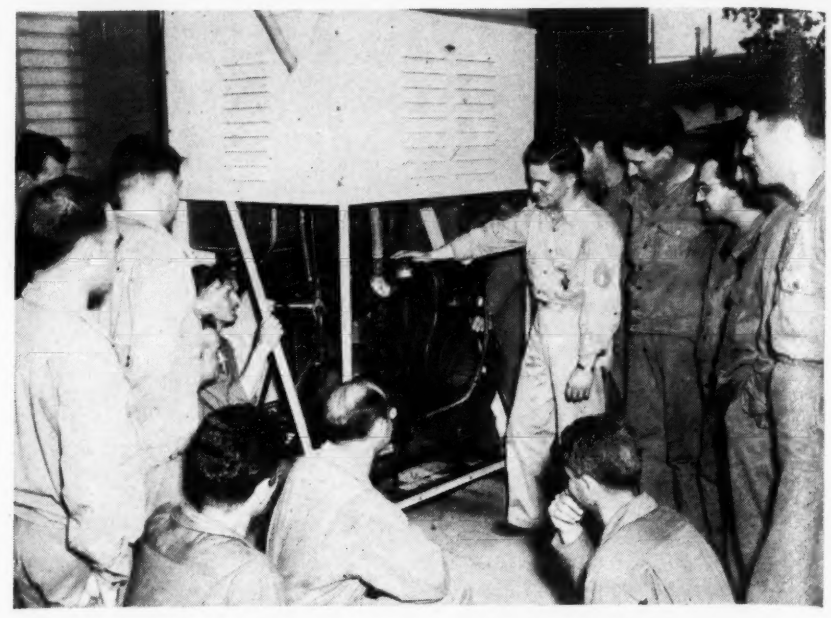
Mr. Wright for the past 12 years was in charge of air conditioning, refrigeration, servicing, and preparation for refrigeration licensing at the YMCA School in New York City.

"In selecting soldiers for the Refrigeration School at Camp Lee," Mr. Wright explained, "we try to get men with experience in the field. They are given an extensive eight-weeks course in both theory and practical problems. At the end of this training they are prepared to go out into the field and handle any and all refrigeration problems that may develop in the armed forces."

The soldier-refrigeration experts learn how to build, run, and repair all types of equipment, from the small household unit to the large industrial type. "In the small machine field," Mr. Wright said, "We deal with units that are entirely automatic. Their design differs from the larger commercial and industrial machines which are manually operated."

An important phase of the school's work is instruction in the assembly, dismantling and operation of portable refrigeration equipment, a great deal of which is used in modern warfare.

They Fix 'Em on the Bench or In the Field



Staff Sgt. Elton W. Mattson explains to soldier students the operation of a portable gasoline-operated refrigeration unit, such as used in the field.

Theory is abandoned here as a group gets down to actual practice at the welding bench, part of the regular course.

Learning by Doing

These soldiers are studying the brazing of small parts.

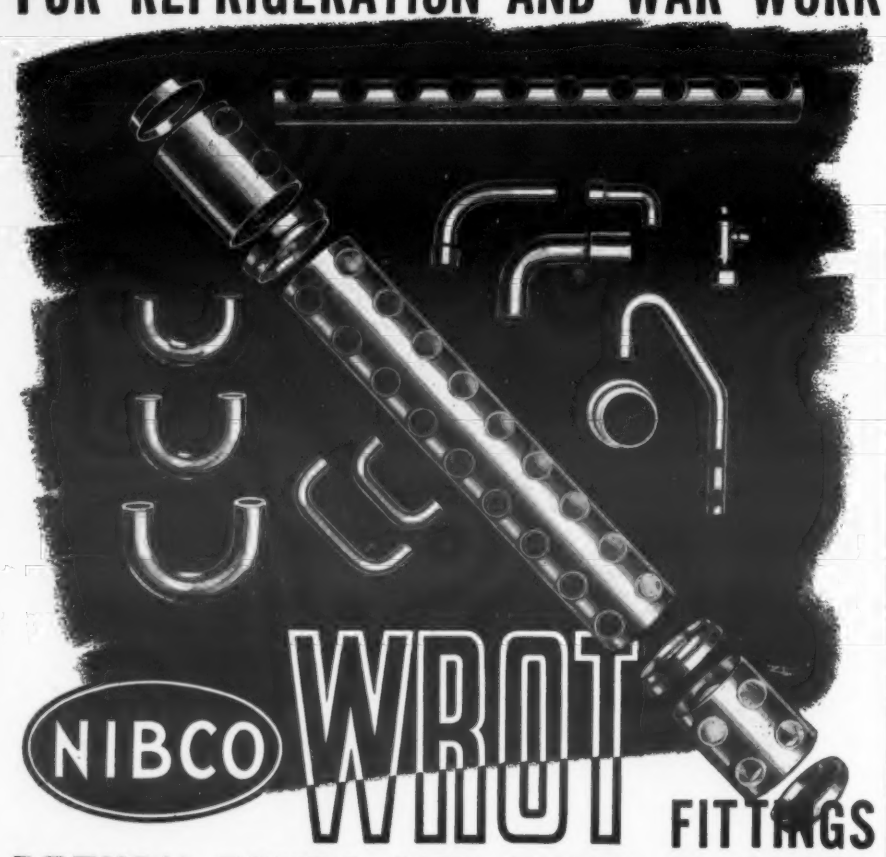
This portable unit may be assembled anywhere in the field and operated as a regular cold storage plant. It has two gasoline-driven refrigeration units attached to it. A model of the portable unit is erected adjacent to the school building, where it is studied and operated by students under skilled supervision.

The modern army transports its food by truck and boat to distant points. The food must be cooled during transit and the correct temperature maintained so that it arrives in proper condition. Students make an intensive study of the refrigerated truck and other units employed in mobile refrigeration.

Numerous trips are made by the students to cold storage plants, both in camp and in nearby cities, where they see freezing machinery actually at work. The plant's layout,

(Concluded on Next Page)

FOR REFRIGERATION AND WAR WORK



NIBCO WROT FITTINGS

RETURN BENDS AND TUBULAR PARTS

BEFORE you order a special part look in our Catalog No. 613 showing NIBCO Wrot Fittings for Air Conditioning and Refrigeration. Nine chances out of ten you'll find what you need in our standard line . . . tees, els, couplings, reducers, adapters, crosses, return bends, hangers . . . more than 1000 items and sizes are listed. Write for your copy if you do not have one. NIBCO also manufactures a vast number of amazingly interesting fabricated tubular and non-ferrous cast parts. Tell us your problem . . . we'll give you the answer.

NORTHERN INDIANA BRASS CO.
ELKHART, INDIANA
VALVES AND FITTINGS SINCE 1904

NEW FORM OF MATTER PROVED TO BE THE BEST HEAT INSULATOR KNOWN

SANTOCEL'S Resistance to Flow of Heat Even Greater Than Physicists Believed Was Theoretically Possible

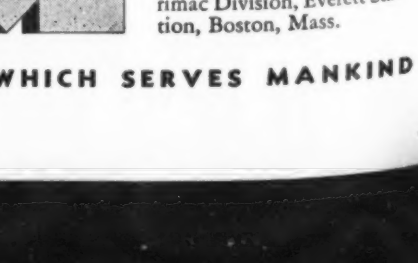
SEVERAL years of exhaustive laboratory and actual use tests have been completed and Monsanto Chemical Company is now able to offer the refrigerating industry a new insulating material more efficient than any yet known.

In fact, careful and accurate measurements have proved beyond any possible doubt that the thermal conductivity of the new material is significantly lower (about 15%) than that of "still air", the best physicists previously believed theoretically possible.

The new material is Santocel, a silica aerogel which is, in effect, a new form of matter.

Thanks to its greatly increased insulating efficiency — 1.7 times that of glass wool or cork and more than twice that of diatomaceous earth — Santocel holds great promise for low temperature units such as those used for special test equipment and for the storage or transportation of liquefied gases and frozen foods.

As for household refrigerators, its use in a conventional home unit should result in such significant reductions in the insulating space that it will be possible to build a refrigerator of 9 cu. ft. capacity with outside dimensions no larger than a present-day 6.4 cu. ft. box and with no loss whatever in thermal efficiency.



These curves show K factor plotted against mean temperature for diatomite, glass wool, cork and Santocel. Data was taken from the International Critical Tables. Since points given were not sufficient to cover a wide range of mean temperature, curves have been extrapolated (in dotted lines) to cover the same range as Santocel.

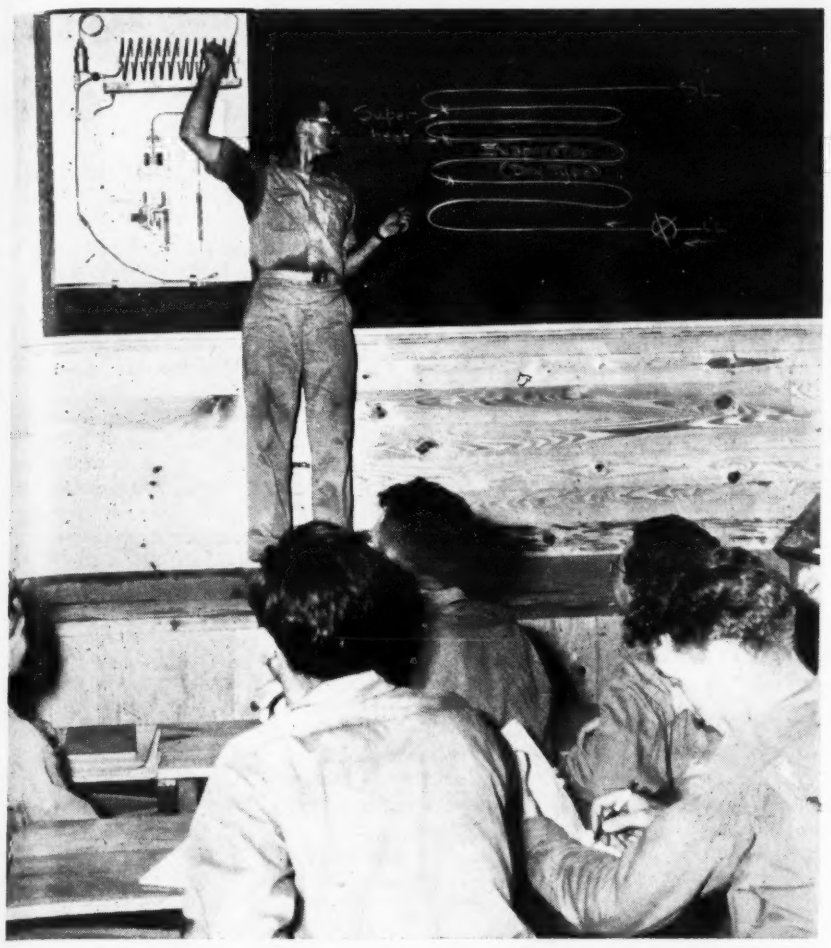
Unlike conventional silica gel, Santocel does not pick up significant amounts of water vapor from the air. Also, diffusion of moisture-laden air, a common source of insulation difficulties in low-temperature insulation, is non-existent in Santocel. As practical proof, Santocel-insulated cabinets have been tested under very adverse humidity and temperature conditions over a two-year period and condensation has not been measurable.

Finally, Santocel is inert, and will last indefinitely. Properly installed, very little settling will occur. For full technical details and samples, inquire: MONSANTO CHEMICAL COMPANY, Merrimac Division, Everett Station, Boston, Mass.

MONSANTO CHEMICALS

SERVING INDUSTRY . . . WHICH SERVES MANKIND

A Lecture by the Skipper



Capt. Allan Johanneson, head of the refrigeration school, lectures on evaporators. Note how he relates blackboard sketch to parts on drawing.

Quick-Freezing Saves Many War Necessities

WASHINGTON, D. C.—Indications of the valuable savings in shipping space and materials contributed by the quick-freezing industry to the war effort were presented recently in figures released by Lawrence S. Martin, secretary of the National Association of Frozen Food Packers.

Taking as a base one million pounds of peas, or about 1% of the estimated pack of peas in the quick-freezing industry this year, the figures reveal that only 18,382 cases containing 72 12-ounce cartons would be required for one million pounds of quick-frozen peas as against 49,630 cases containing 24 number 2 cans for a million pounds of canned peas.

Moreover, the canned peas would require 43,180 cubic feet of storage and shipping room, the equivalent of a 64 car freight train. The quick-frozen peas, on the other hand, would require 27,940 cubic feet of storage and shipping room, which is the equivalent of a 31 car train.

Mr. Martin's figures also reveal interesting comparisons in shipping weights and costs of materials used in the two types of processing. Shipping weight of the canned peas would be 2,306,498 pounds, and that of the quick-frozen peas would be slightly less than half of that figure.

Costs for packaging materials needed in quick-freezing tell an important story, especially in the face of tin and sheet steel shortages. Paper board for cartons, shipping cases, cellophane, and waxed paper brings the cost of materials for packaging a million pounds of quick-frozen peas to $12,745.09. Comparatively, the cost for materials in canning, labeling, and boxing canned peas amounts to $31,715.87.

Supply Room—Study In Neatness

The school's supply room has all the necessary items, and is a model of neatness and efficient storage.

8 Weeks Course of Verbal and Practical Instruction Fits Men For Field Work

(Concluded from Preceding Page)

manner of operation, and other data are studied.

The Refrigeration School is equipped to give training to students on practical experiments, from the most simple to the very complex. All the tools and instruments used in refrigeration work are provided. The students do such work as breaking down compressors and overhauling them, charging machines with refrigerant, adding oil, studying various types of valves and throttle devices, and correcting various troubles.

Classroom work is another important phase of the instruction program. "We usually have several specialists in our student body, and use about 5% of the class as instructors," Mr. Wright declared.

TYPE OF INSTRUCTION

Throughout the entire eight-week course, students have verbal and written examinations. They are sent to the Camp's Subsistence School where they learn about cuts of meat, storage temperatures, and methods of arrangement of perishable foods in refrigeration. This school provides students with background that fits into the general field of food supply and food preservation.

"Our students come from air conditioning firms, ice plants, cold storage firms, and general service enterprises all over the country," said Mr. Wright.

Each refrigeration system is broken down into individual parts, and each part studied by the student so its construction, function and operation is understood, the instructor pointed out.

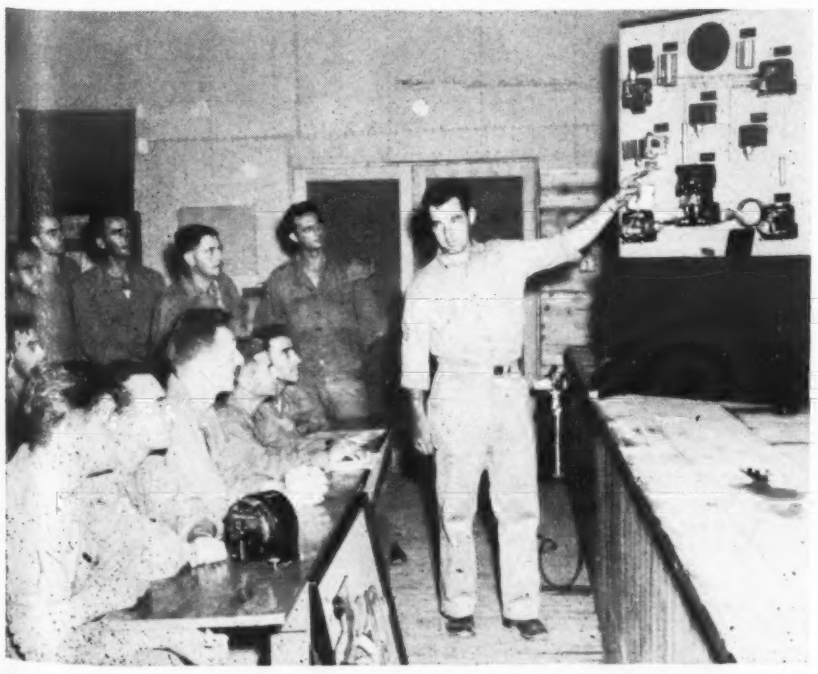
From the Refrigeration School flows a constant stream of trained experts who go to the four corners of the globe to do their part in helping to feed Uncle Sam's armed forces. Yes, refrigeration has gone to war—safeguarding food, the life blood of the military machine.

In France during the first World War, the American Army had the largest refrigeration plant in Europe at Gievres. But the French had little or no refrigeration cars. This was a serious dilemma.

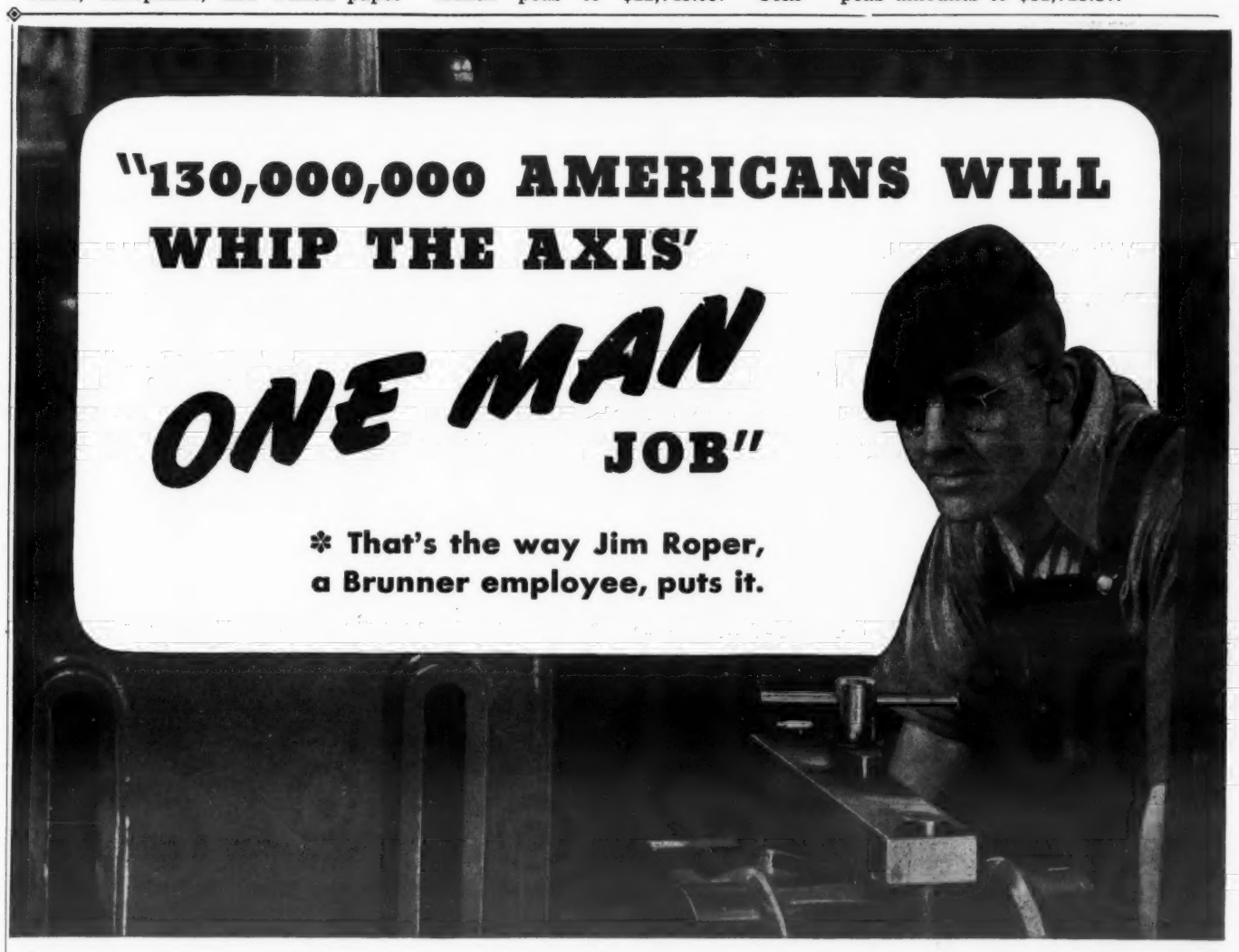
Tonnage space for refrigeration cars could not be spared from the United States. Meat leaving Gievres might be en route three weeks due to bombed bridges and embargoes before it reached American front line troops. Chilled meat would last only a few days. Something had to be done quickly.

The problem was met with the usual American ingenuity by reducing the temperature of the meats to zero, sealing the small French box cars and allowing the zero temperature meat to act as its own refrigerant. This meat was found to be in good condition after three weeks.

To Know a Pressurestat When They See One



Sgt. William Burgeard explains pressurestats and thermostats from the many different models made available for study.

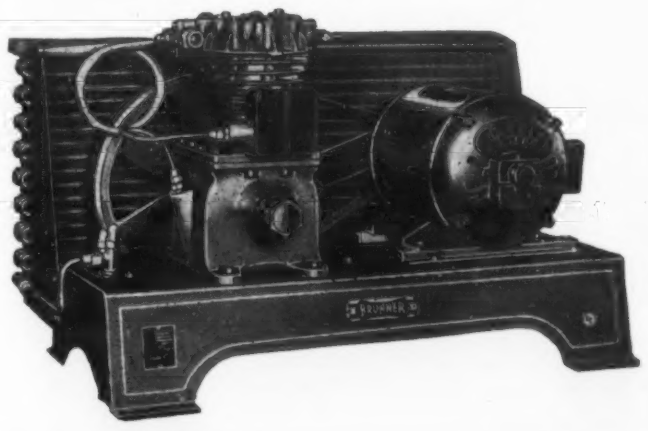


"Today, as every day, Americans are working together towards a common goal . . . security. We men working in refrigeration are proud of our part in defense. We pledge ourselves to do our utmost in providing and servicing refrigeration equipment to preserve foods and prevent spoilage. Combine our work with millions of other American workers and we have a team that will whip the Axis." ★ ★ Brunner, too, is doing its part to meet the urgent demand for dependable refrigeration equipment and a large part of the credit goes to Jim Roper and other employees whose experience, combined with pride of workmanship, is one reason why the food industries depend on Brunner condensing units. Brunner Manufacturing Company, Utica, N. Y., U. S. A.

BRUNNER

COMMERCIAL REFRIGERATION

✻ A company is nothing more than a group of men working toward a common goal. When their personalities, beliefs and purposes are combined, company character is formed. Jim Roper, milling machine operator, explains Brunner's new resposibility.



What's New

Descriptions of some of the brand new items for the refrigeration and air conditioning, and major appliance fields.

3-Way Magnetic Valve Handles Fluids & Vapors

GLENDALE, Calif.—A redesigned 3-way magnetic valve which includes both larger iron pipe sizes and port sizes, has been introduced by General Controls Co.

The valves, designated as Series W-3-3, -4, -5, are capable of handling oil, water, air, gas, steam, refrigerants, and similar fluids and vapors not corrosive to valve material up to 400° F., with I.P.S. sizes up to 1 inch and port sizes to 15/32 inch.

Three-way valves are widely used for control of fluids to piston and diaphragm operators on valves, doors, and gates as well as for applications where fluids must be distributed from a common source, for pneumatic pumping or for selection of fluid sources.

Being of the single magnetic type, the valve cannot assume an intermediate position, i.e., when port No. 1 is open to the flow, port No. 2 is closed when current is on; when current is off, port No. 2 is open to the flow and port No. 1 is closed. Valve construction is such that if reverse action is desired it is only necessary to change No. 1 and No. 2 connections.

New design also permits high pressure connection to either common, No. 1 or No. 2 ports without affecting valve operation as long as pressures (differential) are held within certain ratings.

Two Ventilator Types Designed for War Plants

SYRACUSE, N. Y.—A bulletin describing a new series of war plant ventilators for blackout and other factory buildings has recently been issued by the Carrier Corp.

Designed to prevent transmission and reflection of illumination from the building interior or the reflection of light from the night sky, the Carrier war plant ventilators are available in three types as follows:

(1) Exhaust ventilators to remove hot humid air from the plant, exhausting it at the roof;

(2) Supply ventilators to replace the excessively hot plant air with relatively cooler air from outdoors, drawing air in at the roof and supplying it with uniform circulation to the working areas.

(3) Tempering ventilators which warm and deliver air to the plant, drawing the air in at the roof and providing the needed ventilation with tempered air to prevent drafts and cold spots in the plant during cold weather.

The bulletin illustrates the three types and presents descriptions, specifications, dimension drawings, and tables.

Each of the types described comes in three standard capacities—10,000; 15,000; and 20,000 c.f.m. The units may be used singly or in multiple.

Atmospheric Cooler For Industrial Uses

RACINE, Wis.—The new QUAD atmospheric cooling and condensing tower, has recently been designed by the Young Radiator Co. here.

This new unit resembles a tower some 14 feet high and measuring around its base approximately 12 feet. The name "QUAD" indicates the arrangement of the cooling unit since it is formed into a four sided assembly, the sides of which are comprised of heat transfer surfaces for water, oil, or gas cooling and for steam or condensing as required.

A high capacity induced draft fan is mounted horizontally at the top of the tower drawing air through the heat transfer elements and discharging it upward through an aerodynamically designed discharge stack.

Listed among the capabilities of this machine, the Young Radiator Co. mentions (1) that it is possible to cool a Diesel engine of approximately 2,000 hp. capacity handling both the engine jacket water and lubricating oil cooling load at a horsepower expenditure of under 25 hp. (2) the heat dissipating capacity of a single unit is equivalent to the heat load which would be required to heat an apartment building having 60 to 70 six-room apartments.

The method of sub-assembly is employed whereby the component side members are individually assembled and supported for ease of handling, the entire unit being erected at the point of operation with the various sides bolted into their respective positions.

At the present time, a large number of these units are being built to handle the cooling requirements of compressors and to process vapors in several aviation gasoline by-product plants being erected in the Middle West, according to the Young Radiator Co.

Blackout Bulb Is Used Without a 'Blind'

BLOOMFIELD, N. J.—A new blackout bulb which can be kept burning for emergency lighting without the need for window shades or blinds has been approved by the War Department and is now ready for use in war plants and government buildings throughout the nation, reports D. W. Atwater, manager of commercial engineering for the lamp division of Westinghouse here.

The new lamp bulb gives a faint glow of orange light sufficient to clearly distinguish objects in a room but not enough to be visible from the air even though placed directly in line with an open window. In war factories, the bulbs will be installed along manufacturing aisles, on stairways and in halls. During a blackout, this light would enable workers to move about safely, switch off machinery or perform any other simple emergency operation.

Although these bulbs are now available only on high priority ratings, the War Production Board may permit civilian use of the new blackout bulbs in sections of the country defined as blackout areas. This would make the bulbs available for private homes, office buildings, stores, hospitals, railroad stations and trains and wherever some visibility is essential in spite of blackout.

Resembling in appearance the familiar household light bulb, the blackout lamp is coated with an outer covering of black except for an orange-red opening through which a narrow beam of light passes. The downward direction of this beam prevents any direct rays of light from being seen by planes. Operated at 15 watts, each bulb will provide emergency lighting for an area of approximately 200 square feet.

War Department regulations provide that the bulbs can only be burned in a downward position and they must be kept at least three feet away from windows or doors.

Positive Lubrication For Pulley Assemblies

CHICAGO—A new wick type lubricator for use on loose pulleys, idler pulleys, clutches, eccentrics, and similar rotating machine parts has been announced by the Oil-Rite Corp.

It is designed to deliver a constant, positive, and regulated amount of filtered oil to shaft or bearing while pulley is in operation, and to prevent oil waste when pulley is idle. The reserve supply of oil is always visible.

This new Oil-Rite loose pulley lubricator consists of a simple glass oil reservoir, mounted on a hollow metal stem. This stem is sealed from the oil in the reservoir, except for two small ports at the very top. Inside the stem is a cylindrical felt wick, which extends through the pulley hub to rest directly on the shaft. A compression spring is wrapped around the wick to hold it firmly in position against the shaft.

As the pulley rotates, and the lubricator with it, centrifugal force throws the oil against the top of the reservoir and into the two ports in the stem. These admit oil to the wick which filters out all dirt and sediment and conducts the oil directly to the face of the shaft.

Oil flow through the wick results partly from capillary attraction, partly from the suction caused by the drag of the wick on the shaft.

Cooling Tower Has Blades Of Plastic & Fabric

PIQUA, Ohio—Blades of the new cooling tower fan built by the Hartzell Propeller Co. are made of a new material—a scientific balance of a carefully compounded plastic and fabric combined under tremendous heat and pressure.

The fabric gives it multiple cross-graining which greatly increases the strength and wearing qualities of the blade.

The all-steel welded hub retains the adjustable-pitch feature, by which a wide range of air deliveries can be efficiently obtained. The hub base is half-inch plate to which are welded quarter-inch steel gussets. Hub center is a high carbon steel, with key-way.

Vacuum Cleaner For Use In Shop Work

CHICAGO—Breuer Electric Mfg. Co. has developed a new hi-cycle vacuum cleaner here for production line and shop cleaning.

It is especially suited for continuous, heavy-duty cleaning, as the unit does not use commutator or carbon brushes, thus permitting continuous operation.

N. Y. Small Plants Pool Resources For War Jobs

NEW YORK CITY—More than 50 "pools" of small industrial plants have been formed in New York City to produce war material either as prime contractors or subcontractors, said George A. Sloane, New York City Commerce Commissioner.

Members of these pools were brought together and assisted by Mr. Sloane's department and the local offices of the War Production Board.

As the result of the "pools" already established, a substantial volume of war contracts and subcontracts that otherwise would be allocated in other sections of the country are going to New York City plants.

This alleviates some of the distress incidental to the cessation of civilian production on items using strategic or critical materials, Mr. Sloane said.

Many large corporations with primary contracts for war supplies are making use of his department's facilities to farm out work among subcontractors, and one electrical manufacturing company, he said, has placed subcontracts in excess of $9,000,000 with firms scattered through the city.

Most of the prime contractors in the New York City area are glad to cooperate with the department in awarding sub-contracts to local firms, according to Commissioner Sloane.

Discussing the problem of the small manufacturer no longer able to continue civilian production because of material shortages, Mr. Sloane said:

"The average small manufacturer lacks engineering talent and has an inadequate sales staff when it comes to approaching government procurement officers. The pooling arrangement of manufacturers worked out under the WPB, subject to the approval of the Department of Justice, has met this need in those instances where the manufacturers have the initiative and 'know-how' in forming pools. Many lack this knowledge. We are hopeful that the small War Plants Corp. will find a means of supplying this initiative."

Radio Producers Are 'Guinea Pig' For New WPB 'Budget' Control

WASHINGTON—Amory Houghton, Director General for Operations, announced Aug. 28 that an experimental plan for budgeting the use of materials by prime war contractors, known as Contract Production Control, is being tried out in connection with three Navy contracts for radios. Mr. Houghton said that if the plan is successful it may be given a place in the War Production Board's general program for controlling the flow of materials.

Principal feature of Contract Production Control is the setting up of a complete budget of materials and parts required to fulfill a prime war contract.

The prime contractor obtains from all of his sub-contractors on a specified form (CPC-2) information which will show both materials requirements and a proposed shipping schedule for the parts which the sub-contractor will supply.

These reports will be assembled by the prime contractor on Form CPC-1, together with a statement of his own materials requirements and a production schedule of parts he will make himself, and submitted to the contracting agency.

Preference ratings will be assigned to the approved deliveries of materials and parts and applied in the usual manner. It will be the intention to assign ratings high enough so that the schedules can be exactly met, with the result that deliveries should be neither earlier nor later than necessary to fulfill the contract delivery dates.

In order to avoid duplicating authorizations to purchase materials under the Production Requirements Plan, firms operating under both plans are required to deduct materials authorized under Contract Production Control from those authorized on fourth quarter PD-25A and PD-25F forms.

Water Coolers Affected By Steel Order Change

WASHINGTON, D. C.—Mechanically refrigerated drinking water coolers are among 30 items affected by changes and amendments to Steel Conservation Order M-126 issued Sept. 4 by the WPB.

Amendment No. 5 to Order M-126 makes 30 changes in items on List A, Supplementary List A, and List C. The "A" lists comprise articles which cannot be manufactured of steel, except as outlined, while List C is the military exemption list.

List A now includes "electric drinking water coolers except for war plants."

Added to List C by amendment No. 5 are "electric drinking water coolers for use on board ship, in hospitals, and in tropical climates."

'I Told You So' Copy Keeps Rentals Booming In Colo. Locker Plant

DENVER, Colo.—While a lot of frozen-foods locker plant operators in the country have stopped advertising altogether, Frank Sailer, president of Sailer's Frozen Foods Lockers here is running an almost-daily ad in Denver newspapers exhorting housewives to protect themselves against future meat rationing by the use of larger locker space.

Headed "I Told You So" the ads are two column display spaces unique in locker plant "merchandising." A typical one states "Meat may be rationed. Protect your families by buying a half beef, hog, or lamb wholesale, and storing it in our frozen food lockers."

Underneath, in each ad Sailer has inserted copy which reads: "Warning—your order will have to be placed 10 days before you can start using meat. Our day and night shifts cannot take care of the demand." The Sailer fronts, at 1611 Market St., and another at 9285 W. Colfax, have been swamped by anxious customers for more than three months, and have contracted for another 250 lockers if materials can be obtained.

SILICA GEL

IS DEFEATING MOISTURE ON *Two Fronts*

GREATER CAPACITY
ACTS INSTANTLY
REMOVES ACIDS
DOES NOT CAKE OR POWDER

ON THE WAR FRONT

Guarding implements and materiel of war against corrosion, rust and mildew caused by moisture during shipment to far-flung battle lines—so that our fighting forces will not be delayed putting these weapons to effective use.

ON THE HOME FRONT

Guarding America's refrigerators against damage caused by moisture in the refrigerant—improving efficiency and adding years of life to existing equipment—a Conservation job that permits more raw material to flow into ships, planes, tanks and guns.

THE DAVISON CHEMICAL CORP.
Silica Gel Dept.
BALTIMORE, MARYLAND

Selective Service

Gen. Hershey Explains Procedure Followed By Employers in Seeking Deferments but Stresses Need for Training Draft Exempts

By Maj. Gen. Lewis B. Hershey, U.S.A., Director of Selective Service

Manpower is a most important strategic material of today. Every employer should make a prompt inventory, appraisal and analysis of the manpower in his own plant as he would inventory his stock pile. In order to keep production going and at the same time furnish men for the armed forces, industry should now establish an orderly replacement program.

In order to secure temporary deferments for essential men while he is training women, young men, older men, men physically handicapped or those with a high degree of dependency, the employer should know the fundamental principles in the operation of his local Selective Service Board.

Certain steps should now be taken by each employer. He should know how many men on his pay roll are between the ages of 20 and 45. He should investigate the classification of every one of those men. On the basis of such an inventory he should prepare to plan ahead and train men for replacement of those who must necessarily enter the armed forces if we are to have the sort of army which can win the war.

DEFERMENTS TEMPORARY

Deferments, granted so that employers may train women or men not liable to early induction, are temporary deferments; they cannot exceed six months and in many cases may be for only 30, 60 or 90 days. The Army today has to train a bomber pilot within a period of eight months to operate a very technical machine with an instrument board which puzzles an expert.

Why, therefore, should industry insist that it assume that it can take two or three years to train men for industrial tasks not nearly so complicated?

The fundamental purpose of every deferment of a registrant is to allow an employer to train a replacement. Only in a few rare instances can an employer expect to have these temporary deferments continued for more than the six months period. These are only in cases where an abnormally long period of training is required for a replacement and the eight months needed in which a bomber pilot can be turned out now, is something to remember in this connection.

EMPLOYER'S RESPONSIBILITY

Employers may seek the deferment of their necessary men with or without their consent.

Here is how they go about it.

On page 3 of the Selective Service Questionnaire (Form 40) which is sent to each registrant before he is classified is the following:

INSTRUCTIONS: IF YOUR EMPLOYER BELIEVES THAT YOU ARE A NECESSARY MAN IN A NECESSARY OCCUPATION, IT IS HIS DUTY TO FILL OUT FORM 42A REQUESTING YOUR DEFERMENT. YOU MAY ALSO ATTACH TO THIS PAGE ANY FURTHER STATEMENT BY YOURSELF WHICH YOU THINK THE LOCAL BOARD SHOULD CONSIDER IN DETERMINING YOUR CLASSIFICATION. SUCH STATEMENT WILL THEN BECOME A PART OF THE QUESTIONNAIRE.

This is on all the questionnaires distributed during the past six months. The fact that the Selective Service System now specifically mentions the filing of Form 42A as the manufacturers' duty is a clear indication of the Selective Service System view on the responsibility of each employer in this matter.

The employer can secure Form 42A at the local board and the local board will consider the employer's request when the form is properly filled out and signed.

If such request should be denied because the man, after consideration of the claims offered for him, is not considered to be indispensable to the company's operation, and is needed more in the armed services, the local board will advise the employer of its refusal of such an occupational deferment.

The local board does this by sending to the employer, at the same time it notifies the registrant of his classification, a Form 59.

MAY MAKE APPEAL

There are 10 days after Form 59 is mailed by the local board to the employer during which the employer can appeal the registrant's case.

The registrant will not be ordered to report for induction during this 10-day period.

In order to take an appeal the employer simply has to sign his name to Form 59 which he has received, and return it to the local board; or in case the Form 59 is not received from the local board, any written request will have full value to make such an appeal effective.

When Form 59 is returned by the employer the appeal procedure becomes automatic.

All necessary forms are available at the local board in the employer's immediate vicinity or at the office of the State Director of Selective Service.

If the local board and the appeal board deny the appeal for the occupational deferment of a key man, the employer may then bring the matter to the attention of the State Director at the State Selective Service Headquarters, with the request that the case be reopened or appealed by him to the President.

DEFINE DUTY

A double duty rests upon the employer. He should personally know what his manpower situation is. He should not leave the job to a minor employe to decide who is necessary. The employer who delegates the task of filing a request for deferment to a clerk, the executive who does not make a complete inventory of his whole plant today, is negligent. Likewise, the employer who files requests for deferment of men who can be replaced by women, or others, is keeping reinforcements out of an army which is battling for us all. The employer engaged in essential war production who has been required to greatly expand his plant and who then fails to request deferment for his key men is also negligent.

A good rule to follow: Don't ask deferments for any men who can be replaced by training another individual not likely to be eligible soon for service in the armed forces.

Make an inventory, request deferment for any man whose immediate going into the armed services would retard production of vital war material or other services essential to the war effort, or who is needed to maintain national health, safety and interest.

Only when an employe is working in a critical occupation within an essential industry should a Form 42A be filed for his temporary occupational deferment.

MAKE REPLACEMENTS

Yes, an inventory within a man's own plant is called for; also an appraisal and analysis of the manpower in the community. There is many a man over 45, or a man physically handicapped, or a woman who can do that job that the 23-year-old boy is doing who took a 12-weeks course at a learn-quick school.

There are not more than 60 million people in this country who are capable of effective productive effort. These men and women represent our total manpower available to win the war. They must do everything that must be done in a total war; maintain transportation, communications and utility systems, maintain public services, grow food for ourselves and our allies, mine the metals and produce the raw materials, fabricate and produce the amount of consumers goods necessary to maintain even a restricted national life and the supplies, weapons and munitions of war; also most of all they must provide the men who land on strange shores in far places, the men who carry the fight to the enemy on a multitude of far-flung frontiers.

The rest of the population who mine raw materials and produce the weapons with which these men fight must be a self-disciplined team working in unity. The individual personal convenience, comfort or pleasure, or the convenience and ordinary leisurely replacement programs of the employer, will have to be given progressively less consideration as the war gets tougher and the casualty lists grow.

When we hear of the big armies we are going to raise, we must all remember that it takes at least five men or women to produce what they eat, use, fight with, and wear. With less than 60 million availables in this country, those figures are worth deep consideration.

Illustrated
REFRIGERATION VALVES ARE
No. 206 Thermostatic Expansion Valve
No. 88 Thermostats
No. 220K Thermostatic Expansion Valve
No. 270 Solenoid
No. 204 Automatic Expansion Valve
No. 70N Solenoid Refrigerant Valves
"TRAP-IT"

For America! THROW YOUR SCRAP INTO THE FIGHT!

U.S. NEEDS US STRONG
EAT NUTRITIONAL FOOD

Helping UNCLE SAM..

Eating nutritional foods under Uncle Sam's nation wide drive for better nutrition, is easy today.

Refrigeration, Dependably Controlled with A-P Valves, enables Americans to have *all* the keen, stimulating, appetite-arousing tang out of their nutritional foods by keeping them fresh in transit and in storage.

Keeping present refrigeration equipment operating at peak efficiency for Wartime Food is a pledge Servicemen and A-P Valves can handle easily.

AUTOMATIC PRODUCTS COMPANY
2450 NORTH THIRTY — SECOND STREET
MILWAUKEE WISCONSIN
Export Dept. 100 Varick St., New York City

ap DEPENDABLE Refrigerant Valves

Airmax Corp. Merges with Pacific Gas Radiator Co.

HUNTINGTON PARK, Calif.—Merging of the Airmax Corp., San Diego, Calif., manufacturer of aircraft heating equipment, with the Pacific Gas Radiator Co. here, under the new firm name of Pacific-Airmax Corp., has been announced by R. C. Gross and Helen A. Hartfield, respective presidents of the two companies.

"The merger was effected primarily to facilitate and extend the participation of both of the organizations in the way of war effort," said Mrs. Hartfield, who continues as chairman and president of the corporation.

R. C. Gross will take the office of vice president and general manager of the new firm.

General offices of Pacific-Airmax Corp. will be located in the Huntington Park plant.

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For information about nearest source of supply, write to
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Frankford P. O. Philadelphia, Pa.

TO ASSURE QUICKER DELIVERIES RETURN EMPTY CYLINDERS PROMPTLY!

There is a shortage of cylinders for refrigerants. If you will return your "Artic" Methyl Chloride containers as soon as empty, your deposits will be repaid immediately—and you will prevent delays in shipments of "Artic" to your shop! Round up any empties you have now and ship them back!

Maximum Price Rules

What Service & Repair Shops Must Do to Comply with Order

WASHINGTON, D. C. — The four principal things that must be done by shops servicing electrical and gas appliances and radios to comply with the Service Regulation (Maximum Price Regulation No. 165, as amended) has been outlined in a recent bulletin of the Retail Trade and Services Division of the Office of Price Administration.

The bulletin also included a sample statement of the kind that such service firms must file with their local War Price and Rationing Board.

Included among the services for which Regulation No. 165 sets top charges (maximum prices) are the repair, maintenance, or rental of:

Electrical Appliances (small or portable, commonly used in homes, hospitals, hotels, institutions, offices, retail establishments, or schools.)

Electrical household or kitchen equipment whether from or in homes, hospitals, hotels, offices, retail establishments, schools or other institutions (including but not limited to food mixers, ironing machines, lamps, ranges, refrigerators (household), sewing machines, vacuum cleaners, washing machines.)

Gas Appliances (except gas furnaces, industrial equipment, unit heaters, or water heaters.)

Radios and Phonographs (not primarily designed for commercial, military or police use.)

Also included are the prices of all commodities, such as **parts** and **accessories,** when sold in connection with the sale of a service.

The amended regulation covers the maximum price of these services at all levels—retail, wholesale and contract. Prices must not exceed the highest price charged in March for the same or similar service even though prices for labor or material may have increased since then.

Four main things that appliance and equipment service shops of all kinds must do to comply with the Service Regulation are:

1. Charge no more than you did in March, or charge no more than you would have charged in March for services offered but not sold.

2. Prepare by Sept. 1942, to the full extent of all available information and records and thereafter keep for examination by any person during ordinary business hours a statement of your highest March prices. File a duplicate of this statement with your War Price and Rationing Board.

3. Keep all records showing prices charged or offered during March.

4. Give sales slips and receipts as required by the regulation.

While details of these requirements are given fully in the Services Price Regulation, a brief description of those four main points is given here.

1. MAXIMUM PRICES

If you charged a flat or definite amount for a specific service in March, that is the most you may charge now for that same service. Thus, if you charged $1.50 to clean and adjust burners on a gas range, that is your ceiling.

On all service work which in March you priced according to a regular rate or pricing method (such as time records or labor manual used in connection with an hourly customer rate), you may use that rate or pricing method in determining your maximum prices for such services. But the rate or the charges for each item in the service (labor, material, etc.) must be limited to those in effect in March, 1942.

For example, you repair washing machines. In March it was your practice to charge $1.50 an hour for labor, profit and overhead, plus the cost of parts at the manufacturer's list price. In March you did not happen to replace a leaky tub, but if you had done so, you would have priced it by your usual method. Your ceiling price for replacing a leaky tub is now $1.50 an hour for labor, overhead and profit, plus the manufacturer's price, as quoted in March, for parts.

You may not make an extra charge for delivery or any other part of the service which was included in your March price.

You must continue to give the same discounts and allowances which it was your custom to give in March.

2. RECORDS

Keep all records of any kind which have any bearing on prices you charged in March. Such records would include duplicates of customers' sales slips, invoices, work orders; also posters, display cards, advertisements, letters, post cards, etc., in which service prices were quoted.

3. STATEMENT OF MAXIMUM PRICES

Prepare two copies of a statement of your ceiling prices for your services and have them ready by Sept. 1, 1942. One copy must be kept in your place of business for public inspection. The other must be filed with your local War Price and Rationing Board in September.

This statement may be prepared on your own stationery or on plain white paper, and should contain the following:

(a) A list and a description of the services you supplied during March 1942 for which you regularly quoted prices in that month; and

(b) The highest prices you charged for these services during March; and

(c) The rate or pricing method, if any, you regularly used during March, 1942 for services on which you did not have a flat or set price and which you priced according to an hourly rate or other method; and

(d) All customary allowances, discounts and other price differentials which you customarily allowed or offered in March.

The regulation requires you to keep your list up to date and complete by adding to it descriptions, prices, rates, and pricing methods and charges for all services sold by you for the first time after March, 1942 which are not the same as or similar to, or are not priced by the same rate, or same pricing method and charges, applicable to services for which prices have already been filed.

If you start a new business or add a new service not covered in your previous statement, you must prepare such a statement within 10 days and file it in 20 days. Be sure that your statement for this new service contains all of the items of information listed under a, b, c, and d in the same manner as if the new service had been supplied in March, 1942 and that in addition, you set forth the date when the service was first sold, and the manner in which the maximum price, rate, or pricing method and charges was determined, including the name of your most closely competitive seller of the same class as yourself, if your maximum price is determined by reference to such competitor's price.

On any portion of a business which is **not at retail,** prices need not be made public if it is claimed that substantial injury would result therefrom. This claim must be made in an affidavit and attached to the statement you file with the local War Price and Rationing Board. The Office of Price Administration will keep such prices confidential unless to do so is contrary to the purpose of the regulation.

Many service shops set their prices by using an established flat-rate or similar manual. If you did last March, you can show your ceiling prices simply by:

(a) Identifying clearly the manual you used in March by filing its name and edition number or date; and

(b) Stating your customer's hourly rate in March (your hourly labor charge) where the manual required you to use one or where you did use one; and

(c) Indicating all cases where it was your custom to deviate from the manual; and

(d) Showing how you set prices in March in those cases where you did not use the manual.

4. SALES SLIPS AND RECEIPTS

If you have usually given a duplicate of the work order or any kind of sales slip as a receipt for money paid, you must continue to give whatever kind of receipt you customarily gave.

Whether you gave a sales receipt or not, when requested, you must give a sales receipt showing your name and address, the date, the service supplied and the price charged.

It is felt that these main "guide posts" will give most service shops most of the information they need for general guidance to compliance with Maximum Price Regulation No. 165, as amended.

The regulation, however, is the document that fixes the legal duties of the persons selling services which come within its provisions. In order to be sure that all prices are in full compliance with the regulation, and that therefore the seller is protected against legal action, you should be sure to read and familiarize yourself with the provisions of Maximum Price Regulation No. 165, as amended.

In addition, ways to find the legal ceiling prices for services which were not actually supplied but were only offered in March or for services which were neither supplied nor offered are set forth in the regulation. Copies of the regulation can be obtained from any War Price and Rationing Board.

A model statement of maximum prices prepared specifically as a guide for the electrical and gas appliance trade in meeting the filing requirements of the service regulation is shown below. **Prices shown are for the purpose of illustration only,** and are **not** ceiling prices set by OPA. Each establishment must determine its own ceiling prices.

• • •

Sample Statement of Service Prices

(Prices Shown Are Sample Prices for Illustration Only)

In all cases the prices listed below were the highest charged during March.

Prices for services regularly supplied at a fixed charge are as follows:

Domestic Irons	
Element replacement	$2.00
Terminal replacement	.75
Thermostat knob replacement	.70
Thermostat replacement	2.00
Percolators	
Element replacement	2.25
Refinish inside	2.00
Thermostat replacement	1.40
Valve and tube replacement	1.00
Roasters	
Element replacement (bottom)	2.25
Element replacement (side)	2.50
Pilot lamp replacement	.50
Thermostat replacement	2.00
Toasters	
Element replacement	1.50
Waffle Irons	
Element replacement	1.50
Grid replacement	1.75
Thermostat replacement	1.75
Terminal replacement	.75
Refrigerators	
Replacing gasket up to and including 6 cu. ft.	2.00
Replacing gasket over 6 cu. ft. up to and incl. 8 cu. ft.	3.00
Refinishing up to and including 5 ft. refrigerator cabinet	10.00
Refinishing 6 ft. refrigerator cabinet	12.00
Refinishing 7 ft. refrigerator cabinet	13.00
Refinishing 8 ft. refrigerator cabinet	14.00
Vacuum Cleaner	
Replacement of belt (to be brought in and picked up by customer)	.75
Electric Ranges	
Replacing 6-inch element	7.00
Replacing 8-inch element	8.50
Gas Ranges (any make)	
Cleaning and adjusting burners	1.50
Radios	
Installing GX123 Trutone radio in car	3.50

We do general repair and maintenance work on all types of electric and gas appliances and radios. On small appliances we make a flat charge which includes parts and labor. Articles must be brought in and called for by customer.

In March, 1942 repair prices on major gas and electric appliances and radios were based upon a fixed charge of $1.50 per hour for labor, (this charge included overhead or indirect cost and profits) with a minimum charge of $1 per call within city limits. Outside of city limits we charged 10 cents for each mile or fraction thereof for one way. Prices for materials, labor, and mileage were listed separately on our repair bills. We charge for parts supplied in connection with service as follows:

1. Where appliance was of a make we sold, we used manufacturer's list price in catalog in effect March, 1942.

2. Where other make appliances were serviced or regular parts were substituted we took our March cost and added 66⅔ margin (this charge represents our indirect cost and profits) to arrive at price to charge customer.

(Signed) John Jones, Manager
Appliance Sales & Service Company
17 Blank St., Anytown, Ohio.

Dayton
BELT
Silent... Vibrationless...
Dayton
V-BELTS
FOR ALL LEADING MAKES OF HOUSEHOLD APPLIANCES
● We urge you to give full support to the government's rubber conservation program. V-Belts are Vital to Victory. So, you will want to see that V-Belts are properly installed with pulleys in correct alignment and with proper tension.
Dayton V Belts
LIFELINES OF POWER VITAL TO VICTORY
THE WORLD'S LARGEST MANUFACTURER OF V-BELTS
THE DAYTON RUBBER MFG. CO.
DAYTON, OHIO
DAYTON RUBBER EXPORT CORP.
38 Pearl St., New York, N. Y., U. S. A.
Copyright, 1942, The Dayton Rubber Mfg. Co.

Ideas on How To 'Repair' Instead Of 'Replace' In Appliance Service

Servicemen Must Abandon Old Routine of Replacing With Complete Assemblies

MANSFIELD, Ohio — Repair instead of replace is the theme of a service conservation appeal which L. K. Baxter, Westinghouse Merchandise Service Manager, has issued to all men responsible for servicing Westinghouse appliances. He has called for renewed conservation efforts in using sparingly the existing replacement parts now in dealer, distributor and factory stocks so that they can be stretched over the longest possible period to give the best service to the greatest number of customers.

"Today it is our patriotic duty to save, to take every conceivable measure to make our supply of renewal parts last," said Mr. Baxter in discussing the importance of service conservation. "We must discontinue our old practices of replacing complete functional assemblies when adjustments or minor repairs will keep the equipment running. Parts must not be replaced because of minor defects in appearance or minor operating characteristics.

"We must repair instead of replace if we are to meet our service obligation for keeping electrical home appliances operating without hindering the government's intensive drive to conserve critical metals desperately needed to feed this country's war machine."

Mr. Baxter pointed out that many of these recommendations for conservation are not new. For example, instead of replacing panels when refrigerator or range surfaces are chipped, just touch up the finish. This suggestion and many others have been stressed for years as economy measures, but today our national crisis in securing necessary raw materials with which to win this war casts an entirely different light on the problem.

"We now have no choice—we are all resolved that the war comes first, and the appearance of our appliances, even their operating efficiencies, must be subjugated in the best interest of our national cause," he said.

"While we have replacement stocks now, there may be shortages before the war ends," he warns. "This means that certain equipment may be forced out of operation unless we follow a careful plan of using the new parts only when repair methods can't do the job."

In emphasizing this renewed drive on conservation, Mr. Baxter has issued instructions to the dealers and distributors who are responsible for servicing some 30,000,000 Westinghouse appliances in use today. Some of these instructions are general, and some apply to specific appliances, but all are designed to save critical materials.

General

1. Do not replace enamel parts because of chipping, crazing, or warping. For the sake of appearance these defective portions may be patched.
2. Do not replace painted parts—touch up or refinish.
3. Do not replace tarnished or discolored polished parts, clean and polish.
4. Do not replace parts due to rust unless necessary—clean and refinish whenever possible.
5. Do not replace complete assemblies when parts only are necessary.

Refrigerators

1. When possible replace only the worn out part of a door gasket.
2. Don't destroy plastic door panels—they can be treated and used again.
3. Repair broken tray releases, grid handles and evaporator door hinges.
4. Repair hardware by using spacers, shims and pins.
5. Don't replace trays, hardware, shelves, etc. — they can be cleaned and polished.
6. Do not replace noisy units, unless the noise is caused by something which you know will cause complete failure of the equipment.
7. Do not replace a unit as long as it is producing satisfactory food preservation, though it may test slightly under capacity.
8. Do not return any units or parts to the factory which can be locally repaired or adjusted to enable the installation to maintain conditions reasonably close to what it is designed to do.

Ranges

1. If a closed type surface unit is inoperative, replace the element only. On open coil units replace the defective coil only.
2. Do not replace an oven heater due to chipped enamel. The heater will not rust even if chipped.
3. If bushings break on an oven heater use replacement bushings instead of a new heater.
4. When a surface unit lead wire burns out, splice or replace the defective wire only.
5. Don't replace complete thermostats, only the inoperative parts. Before making any replacement, try to restore operation by adjusting calibration.
6. Instead of replacing a complete chain of an oven door, add new links to restore it to operation.

Laundry Equipment

1. Recondition old wringer rolls wherever possible — clean with fine sandpaper or regrind.
2. Discolorations of agitators may be removed by cleaning, or in extreme cases, by sand blasting.
3. Noisy gearing does not always indicate that a replacement is necessary—a change of oil or adjustment may correct it.
4. When a customer believes that the shoe of the ironer is warped because it does not iron properly, before replacing it, try rewrapping the roll. This will many times handle the complaint.

Traffic Appliances

1. Repair all broken cords if enough length is available.
2. Replace only necessary parts of connectors.
3. Do not replace thermostats if they are within reasonable operating conditions.
4. Open type heating elements can usually be spliced.
5. Chipped or damaged handles, dials, and knobs do not always affect operation—don't replace unless necessary.
6. Unless the operation is affected do not replace plated parts.
7. Make full use of all adjustments before considering the replacement of parts.
8. Be sure your diagnosis is correct so that only inoperative parts are serviced.
9. Do not replace warped or bent parts unless unsatisfactory operation is encountered.

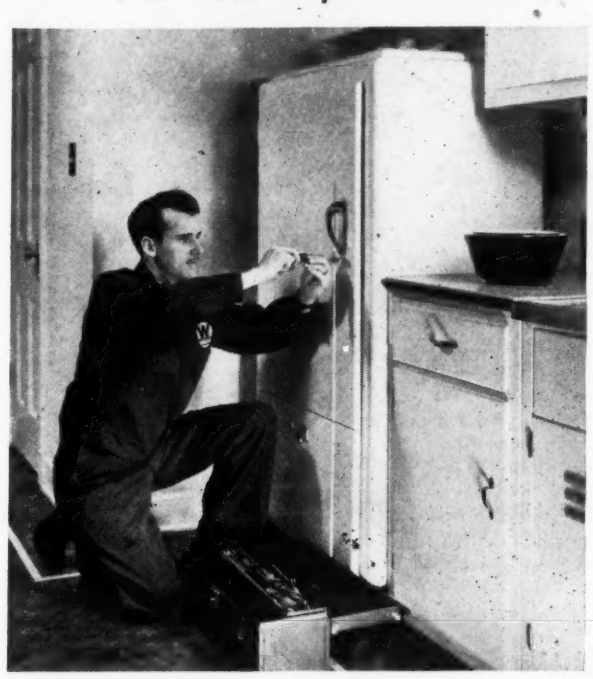
Theater Operators Get Warning on Problems Of Servicing Systems

WASHINGTON, D. C.—All problems confronting theater operators such as air conditioning, copper and fuel oil supplies, the difficulties of converting heating equipment from oil to coal, and the scrap metal salvage campaign were surveyed by the Advisory Committee of the War Production Board when operators of motion picture theaters and legitimate theaters were urged to conserve all possible materials.

WPB told operators that the effect of the war on civilian activities is going to be much tougher from now on, and it is becoming increasingly difficult to meet requirements of their needed materials.

Representatives of WPB's Air Conditioning, Copper, and Plumbing and Heating Branches discussed briefly the critical materials situation. All joined in the opinion that less materials will be available for the amusement industry, and more and more substitution will be necessary.

'Fix 'Em Up' Not 'Junk It' Is the Order of the Day



(Left) Refrigerator door latches, opened and closed an average of 48 times each day, demand adjustment from time to time, as it grows more difficult to replace them. (Right) If the lead wires to the range unit break, splice them together, or if this isn't feasible then replace only the defective lead wire, advises L. K. Baxter, Westinghouse Service Manager.

Hussmann-Ligonier Profit

ST. LOUIS — Hussmann-Ligonier Co. reports a net profit of $103,366 for the six months ending June 30, providing 52 cents a share on 171,023 shares of common stock.

This is compared to a net profit of $166,380 for the six months ending June 30, 1941 or 8 cents a share.

REA Financed Locker In Alabama Opened

GROVE HILL, Ala. — The only REA financed and sponsored quick freeze and storage plant in Alabama was dedicated here Aug. 4 with Commissioner of Agriculture and Industries Haygood Paterson as the chief speaker at a luncheon of 300 in the Sage auditorium.

The plant here is one of seven REA financed plants in the whole United States. The REA furnished the money which was spent by a corporation organized by REA customers and Grove Hill citizens.

★ ★

FOR

"OUTSTANDING ACHIEVEMENT"

THE
U. S. MARITIME COMMISSION
HAS AWARDED

KEROTEST

1. *THE VICTORY FLEET FLAG*
2. *THE MARITIME "M" BURGEE*
and
3. *THE MARITIME LABOR MERIT INSIGNIA FOR ALL KEROTEST EMPLOYEES*

Awarded for *outstanding efficiency* in the production of valves and fittings for the ships that will help carry America to Victory, we fly these banners and wear the Merit Insignia as a promise of still greater effort and accomplishment in the vital work ahead . . . *every man of us!*

KEROTEST
MANUFACTURING COMPANY
Pittsburgh, Pa.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ KEROTEST ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

What to Check When Electric Motor Does Not Start

Motor Troubles & Their Correction

Editor's Note: Following is part of a section on servicing motors, in a series of articles on motor construction and operation.

By R. A. Fuller,
Industrial Engineering Dept.,
General Electric Co.

Complaint - -

L. User Gets Shocks From the Equipment

1. Ground in Wiring

"Ground in wiring" means that one of the current-carrying parts of the wiring has come in contact with some metal that does not normally carry current. Thus the extension cord of a household refrigerator may become grounded to the metal wall of the cabinet. Let us assume that this refrigerator is resting on a wooden floor which is a fairly good insulator. If the user rests one hand on the sink or stove, these being well grounded by the water and gas pipes, and grasps the refrigerator door handle with the other hand his body becomes a conductor from the cabinet to ground and he receives a shock.

The shock may be light or severe depending on the wetness of his hands, the voltage of the circuit and the resistance of the ground circuit of which his body has become a part. The fact that the user gets a shock at all indicates that a serious condition exists which should be corrected as promptly as possible—a death may be avoided by prompt attention to the condition.

A test lamp connected between the refrigerator cabinet and the water pipe, may light. If it does light, it can be observed while the wiring is poked and jiggled until the ground is located and taped up properly. If the test lamp does not light, or for some other reason it is not possible to locate the ground, connect the cabinet to the water pipe solidly with wire at least as large as that which supplies power to the unit.

This ground wire is a permanent connection which can probably best be placed under one of the framework bolts in the unit compartment at the cabinet end of the wire and connected to a ground clamp on the water pipe. If a ground occurs it will then blow a fuse, but cannot harm the user. Such a ground connection might well be put on all air conditioning and refrigeration equipment when it is installed.

2. Ground in Motor

A ground in the motor shows the same characteristics, and is treated the same, as a ground in the wiring. If the test lamp, referred to in L1, lights when the motor is connected to the wiring, but is extinguished when the wiring is disconnected from the motor terminals, a ground in the motor is indicated. It may be necessary to have a motor service shop repair the motor as rewinding may be involved.

M. Reconditioning After A Flood

In general those areas which are most seriously concerned with flood damage are aware that this is a hazard in their territory. They are also aware of the extent to which electric power and other facilities may be available when the reconditioning of equipment is undertaken after a flood.

With this information it should be very advantageous to plan on this reconditioning in advance. In particular, the greatest need has been for bake-out ovens for drying out equipment. A moderate stock of kerosene with suitable burners, and with definite plans for emergency use of certain cabinets as dry-out ovens, may pay big dividends later.

A flood tends to leave submerged apparatus covered with silt, sewage, and trash. In reconditioning a motor the first step is to wash this dirt away with water. The stream of water should be as gentle as possible to avoid mechanical damage to the motor parts. The motor is then taken apart and the washing is continued until the dirt is completely removed.

In particular it is necessary to remove all lubricant and waste from bearings and replace it with fresh material after the cleaning and dryout.

After washing, the motor is treated to a "General Overhaul" as covered in Chapter V.

Kerotest Gets Maritime Award

E. G. Mueller (left), president of Kerotest Mfg. Co., accepting from C. E. Walsh, Jr. (center) the U. S. Maritime Commission's "M" Pennant and Victory Fleet Flag. The man adjusting his glasses, seated just under the emblem is "Jim" Strachan, sales manager.

New Book on Plastics Authored by G-E Man

CHICAGO. — A new book, "Plastics," by J. H. DuBois, has just been published by the American Technical Society, 850 E. 58th St., Chicago.

Mr. DuBois is a sales engineer in the General Electric plastics department, employed at the Fort Wayne, Ind., factory.

The author in the course of his work as a sales engineer over the past 14 years has found a need among the users of plastics molded or laminated products for a concise summary of the types, properties, and uses of plastics products. The purpose of his book is to provide in one convenient place a broad but detailed summary of the entire plastics industry, containing enough information to enable the user of plastics to choose intelligently the material which will fill his needs.

The book begins with a general introduction to plastics, defining fundamentals and terminology. The author then takes up the various types of materials separately, indicating their sources, manufacture, variations, properties, and applications. These materials include phenolics, ureas, cellulose, acrylic vinyl and styrene, cast phenolic and protein plastics, mycalex, nylon, lignin, resin-bonded plywood, and synthetic rubber-like materials. There is also a discussion of some of the older cold-molded and shellac plastics and a chapter on laminated plastics describing the composition, properties, fabrication and uses of them.

Subsequent chapters deal with the methods of manufacture of plastics products including molding, finishing and decorating. The final chapter on the design of plastics molded products describes the practices resulting in most satisfactory moldings at minimum cost.

WILL BUY ANY SURPLUS REFRIGERATION PARTS FOR CASH, ANY AMOUNT.

SEND LIST AND PRICES

G. A. LARSON CO.
2631 W. Fond du Lac
Milwaukee, Wis.

Service Firm Keeps Employes by Building Morale, Goodwill

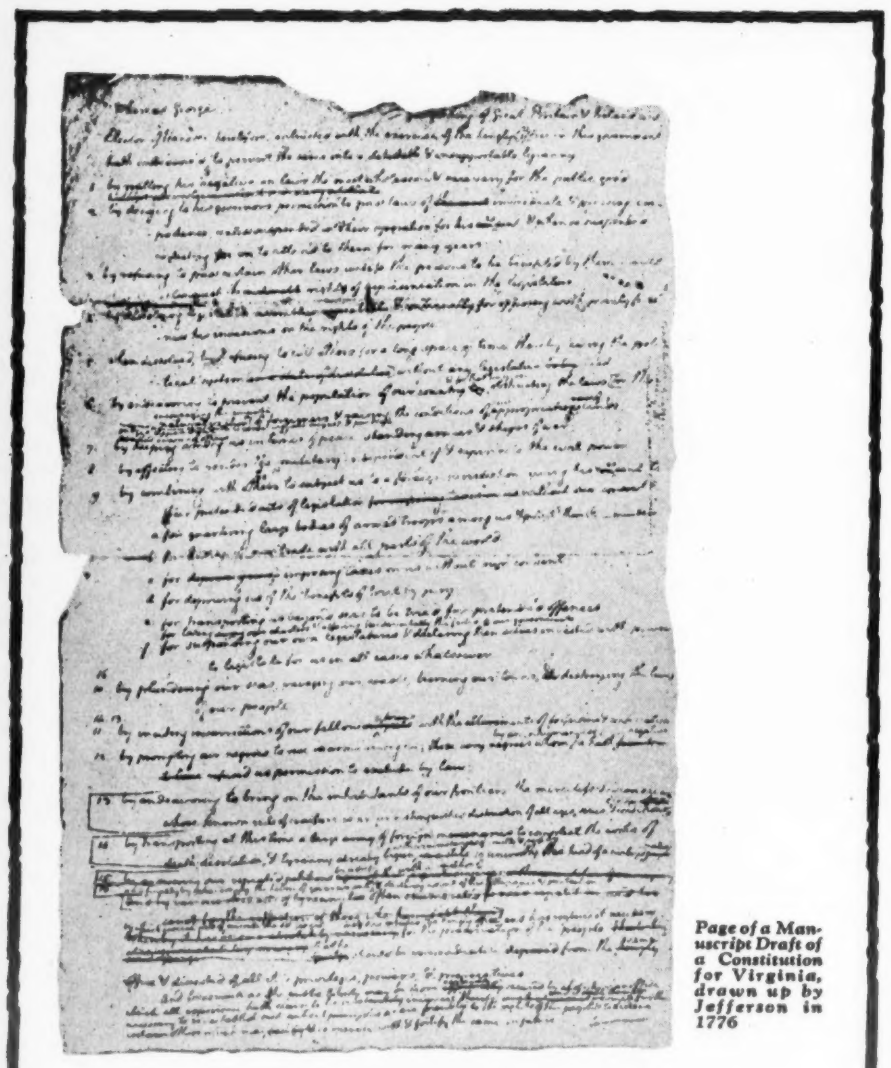
SALT LAKE CITY—That it pays to make the lot of the refrigeration service man as easy as possible is shown by the experience of City Refrigeration Service Co. here, which is completing a program of "work betterment" whereby John Passells, manager, hopes to keep his 11 servicemen contented enough with the job to stay on the payroll.

"It isn't only high salaries paid by the government and defense contractors which has created the present labor situation in refrigeration service," Mr. Passells explained. "Refrigeration service is hard, exhaustive work, and if an employe runs continually up against dirt and thankless labor, it isn't any wonder he will quit. Consequently we have tried to make everything connected with their work as pleasant as possible."

The first thing Mr. Passells did was to raise the wage of his men substantially; enough that each can earn as much as on a government job. This required also raising service rates to $2.25 per hour, but since this was established in March, City Service can maintain it.

Second, Mr. Passells took an unusual step by sending all 11 of his servicemen to an optician to have their eyes tested—as a number of mistakes on the job and filling out job records indicated that poor eyesight may have been at fault. The optician recommended glasses for six of the 11 men, Mr. Passells buying them himself for the men and insisting that they wear them at work. The result was greater efficiency, more appreciative workers, and fewer mistakes. The glasses cost Mr. Passells $55; a sum he feels well spent.

Third, City Refrigeration Service now furnishes each man with a clean pair of white coveralls daily, lettered in blue with the firm name, and adding considerably to the "esprit-de-corps" of the men at work. Coveralls are laundered twice a week, and help the men to feel that they are skilled technicians and proud of their appearance.



Page of a Manuscript Draft of a Constitution for Virginia, drawn up by Jefferson in 1776

Virginia's Constitution, and her Bill of Rights (in those days called "radically" democratic), both served as patterns for the National Constitution and Bill of Rights which came later. Thus Virginia became the foremost advocate of the sound and practical ideals of American democracy.

VIRGINIA—a name that has earned respect

In the present crisis, as never before, the worth of those ideals is being defended by our Nation. Virginia Refrigerants, leaders in their field, are doing their part to help in the maintenance of our democracy and our freedom.

"VIRGINIA" REFRIGERANTS
AGENTS FOR KINETIC'S "FREON-12"
VIRGINIA SMELTING CO.
WEST NORFOLK, VIRGINIA

Doing Double Duty

● Refrigeration valves, fittings and accessories will, in all probability, be doing double duty for many months to come. In the meantime, it is of the utmost importance that those products which you can procure are dependable and will function for the "long haul".

If you are in difficulties, write us. We will do our very utmost to help.

Mueller Brass Co. products have a reputation for quality and long life.

MUELLER BRASS CO.
PORT HURON, MICH.

WPB Okays Plan To Regulate Finished Goods Inventories

WASHINGTON, D. C.—The War Production Board has approved a plan to regulate inventories of finished civilian goods in the hands of wholesalers and retailers, Chairman Donald M. Nelson announced Sept. 8.

The program, Mr. Nelson said, will contribute towards an equitable distribution of inventories throughout the country and can be accomplished through sound merchandising operations without unnecessary hardships or difficulties.

Acting on the basis of recommendations of the special Wholesale and Retail Inventory Policy Committee of the Office of Civilian Supply, which undertook a six weeks' investigation of civilian goods inventory problems throughout the country, Mr. Nelson said that WPB is working on two steps looking toward the balancing and limiting of all wholesale and retail inventories. They are:

QUARTERLY REPORTS

1. The issuance of an order requiring quarterly inventory and sales reports, accompanied by a statement of what the War Production Board considers to be a "normal" inventory. That inventory for each concern would be its present total-company stock related to its current rate of sales in the same proportion as stock was to sales in the corresponding quarter of the years 1939-40-41 averaged.

2. The development of a second order, for possible use if an analysis of the reports discloses a need for such formal control and enforcement in order to maintain "normal" inventories, along the lines recommended by the special committee. The committee recommended that any such order, if issued, should become effective about the first of the year unless the information revealed by the quarterly inventory and sales reports indicates that sufficient progress has been made voluntarily by distributors themselves toward the government's objectives.

At the same time, Mr. Nelson announced WPB approval of another phase of the committee's report calling for quarterly inventory and sales reports by manufacturers of finished civilian goods, and for an immediate inquiry into and testing of the applicability of some form of limitation to manufacturers' inventories.

MANUFACTURERS, TOO

"Such action is deemed essential as the committee seriously questions the effectiveness of any plan limiting wholesale and retail inventories which does not include those of manufacturers," the report states. "This doubt is caused by the wide extent of vertical integration of wholesaling and retailing with manufacturnig and by the likelihood of informal or secret stock-carrying arrangements."

The special committee, which was set up by Joseph L. Weiner, Deputy Director of the Office of Civilian Supply, consulted more than two hundred merchants and manufacturers throughout the country and studied letters on the subject from hundreds more. Conferences were held in Washington, New York, Chicago, and Pittsburgh.

A simple plan of inventory limitation is essential, the committee declared, in order to assure a "steady, uninterrupted flow of available civilian goods from manufacturers to the consuming public."

WHO WOULD BE EXEMPT

The committee recommended two general exemptions from the plan:

1. Any manufacturer or merchant regardless of type of business whose total sales for the 12-month period ending Sept. 30, 1942 (or the end of any subsequent month) were less than $100,000 or whose inventory on the same date was less than $25,000 at cost value.

2. Regardless of size of volume: Merchants primarily engaged in the food business, eating and drinking places, second-hand stores, florist shops, antique shops, service establishments, steel or other raw metal warehouses, dealers in motor vehicles or replacement parts, hay, grain and feed stores, farm implement dealers, and merchants handling fuel oil, coal and other kinds of fuel; manufacturers of food products, agricultural implements, motor vehicles or replacement parts, and refiners or processors of petroleum products.

The reporting stage of the program would consist of collecting, analyzing and interpreting the inventory and sales data of merchants and manufacturers in order to provide information on inventory-sales relationships during the base period, permit comparison of the current inventory - sales relationships with those of the base period, and allow time to study the administrative problems that would be connected with any plan for a formal inventory limitation order.

NOT UNTIL 1943?

The second stage of the treatment of the problem, if the analysis of the reports shows that it is necessary, would involve actual installation and administration of a limitation order. The committee recommended that if such an order is decided upon, it becomes effective at the end of the quarter beginning Dec. 1, 1942, Jan. 1, 1943, or Feb. 1, 1943, the exact date depending upon an "inventory reporting year" selected by each merchant.

The committee stated that it desired to make a prompt recommendation on inventory limitation in order "to facilitate proper planning and placing of forward orders as well as orderly balancing of stocks by merchants and manufacturers." It recommended that further study be made, because of special problems involved, of four classes of merchandise before any formal limitation order is considered for them, but said that they should be included in the reporting period of the program.

These classes include goods now under inventory limitation through the operation of Order L-63, which restricts inventories of 19 classes of supplies held by wholesalers, jobbers, dealers, retailers or branch warehouses; goods frozen or restricted as to sale by rationing or priorities under previous government orders; goods which are stockpiled under previous orders, and alcoholic beverages.

What Nash-Kelvinator Now Builds

Soon to be rolling off the Nash-Kelvinator production lines are the huge, four-motor, freight-carrying planes, a model of which the company's President George Mason is demonstrating to W. F. Armstrong, vice president in charge of the firm's widespread war production activities. While plunged deep in the war effort, the company is not forgetting its dealers, an advertising campaign *(see story below)* is being launched this month to keep the company's tradename before the public.

* * *

Kelvinator Resumes Advertising; Pierce Explains Purposes

DETROIT — Kelvinator retailers have been given renewed assurance of their company's full support with the announcement by Nash-Kelvinator, now fully engaged in war work that calls for a yearly output three to four times as great as its normal domestic business, that in September it is launching an extensive advertising drive.

A comprehensive number of national magazines, major-market newspapers, trade publications and business papers will be used, according to Frank R. Pierce, vice president, who made the announcement. The objective, he said, was full support of the war effort, and the protection of the company's name and its retailers.

In September trade paper copy, a statement over Pierce's signature, declares that Nash-Kelvinator's new consumer advertising has been designed to accomplish three things:

"To report to our present and future owners on the vital part Nash-Kelvinator is playing in America's war effort — the honor of building fleets of great cargo-carrying flying boats, engines for the highest-flying fighting ships in the world, and thousands of propellers for the fighters of the United Nations.

"To promise that the Kelvinators of the peacetime to come will be finer, better then because of the amazing technological developments called for in Kelvinator war work.

"To maintain and to increase, for the future profit of Kelvinator retailers, the brand preference for Kelvinator."

Dramatic full-page, four-color Nash-Kelvinator copy will break in 16 leading national magazines beginning in September, it was made known by H. G. Little, director of advertising and public relations. Also planned for early insertion are black and white advertisements in newspapers in selected markets and plant cities, he revealed.

Layout, he said, will follow the large, dramatic illustration scheme, with headlines generally in the artwork and about a third of the space devoted to copy.

Nash-Kelvinator is now completing its War Production program and will devote its expanded facilities exclusively to the production of mammoth Vought-Sikorsky cargo-carrying flying boats, 2,000-horsepower Pratt & Whitney engines for the highest-flying fighting planes in the world, mass quantities of precise hydromatic propellers, and considerable other military equipment.

Discussing the trade paper phase of the campaign, Charles J. Coward, associate director of advertising, said that the customary separation between the divisions of the company would be observed. In the refrigeration field, Kelvinator and Leonard will have separate advertising, with their own logotypes, Coward said. The familiar Kelvinator phrase, "Get More—Get Kelvinator" will be used in trade advertising.

Coward pointed out that trade papers provide one of the most effective means of maintaining constant contact with the company's retailers and keeping them informed.

Freezing-Vacuum Setup Proposed as Method Of Food Dehydrating

(Concluded from Page 1, Column 5)

cargo space, the new process is of great interest at this time. Any type of food containing water may be dried by the new process with the retention of the food values and natural ingredients, according to the claims made.

The method involves first freezing the food. The frozen product is then put under a vacuum. The ice "sublimes," that is, turns directly into a vapor without passing through the liquid or water stage. In this way most of the water can be readily removed. To get the last few drops of water out of the food the temperature of the frozen product is raised somewhat while the residual water is being removed under the vacuum.

The patent is assigned to the United States Cold Storage Corp., Wilmington, Del.

Citrus Fruit Concentrate for Forces in Foreign Lands Cooled to 35° for Shipping

EAST SPRINGFIELD, Mass. — The much-publicized citrus fruit concentrate being shipped to the allied nations abroad now has refrigerated storage space, according to commercial refrigeration engineers of the Westinghouse Electric & Mfg. Co.

The concentrate, one-eighth the weight of the original fruit juice, is first cooled to 90° F. by water and is further cooled in refrigerated rooms at approximately 35° for 48 to 60 hours to prevent aging. In one concentrate plant the daily production is 77,000 pounds and is cooled in a large storage room, 128 x 34 x 8 feet, divided into four equal rooms, each able to store one day's production.

To cool the concentrate, three day's production is loaded in three rooms. On the fourth day, as the fourth room is loaded, the load is removed from the first room where the product is down to temperature and ready for shipment.

Refrigerating apparatus necessary are two Westinghouse 15-hp. sealed compressors, one 20-ton evaporative condenser and four cooling units. One compressor is connected to the refrigeration units in rooms 1 and 3, and the other to rooms 2 and 4. The control is handled with room thermostats as follows: When cooling is required, the thermostat opens a solenoid valve, starts the evaporative condenser, the condenser pump and the compressor. The unit blowers operate continuously.

Rowland Joins Administrative Staff of Carrier Corp.

SYRACUSE, N. Y.—Appointment of Harold L. Rowland to the administrative staff of Carrier Corp. has been announced by Cloud Wampler, president.

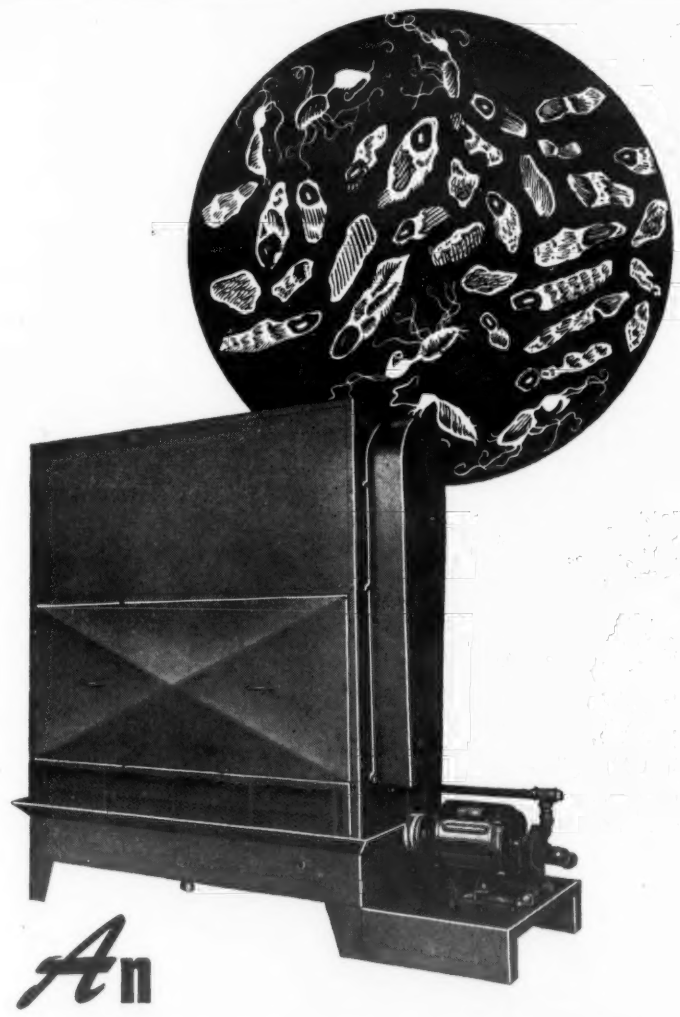
Mr. Rowland has had a broad experience in business and financial fields. He is resigning as president and director of George F. Getty, Inc., vice president, treasurer and director of the Pacific Western Oil Corp., vice president of the Mission Corp., and president and managing director of the Hotel Pierre, New York City.

Haile Elected Tennessee Electric League Head

CHATTANOOGA, Tenn.—Herbert Haile, president of the W. C. Teas Co., was elected president of the Electric League of Chattanooga at a dinner meeting here.

He succeeded Thomas R. McAfee. Other officers named were:

Paul Ramsey, Ramsey Electric Co., first vice president; L. A. Ragon, second vice president of the Ragon Electric Co.; Paul McMillan, secretary of the Electric Power Board of Chattanooga; and J. W. Johnson, Sterchi Bros. Furniture Store, treasurer.



An

INVISIBLE ENEMY

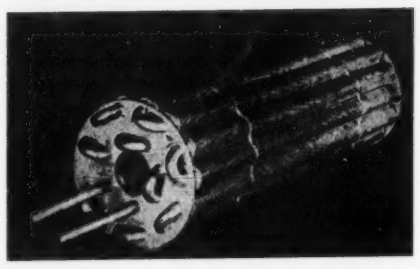
BACTERIA in perishable food unprotected by refrigeration are as dangerous as an army of fifth columnists. *Lack of refrigeration contributed to the tragic outcome of Bataan and Corregidor.*

Fortunately, freezing and cold storage of food have now become a "must" in war planning. On the war fronts and at home, Marlo Refrigeration Equipment does its share to protect food from bacterial infection.

"MARLO MEANS HEAT TRANSFER EQUIPMENT"

MARLO
COIL COMPANY
ST. LOUIS, MISSOURI

No Joints! No Leaks



This Rome Jointless Water Cooled Condenser is a typical example of Rome's ability to provide trouble free condensing equipment. Rome Water Cooled Condensers are used by many leading compressor manufacturers Write for complete information

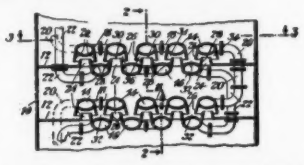
ROME-TURNEY RADIATOR COMPANY

222 Canal Street
ROME, N. Y.

PATENTS

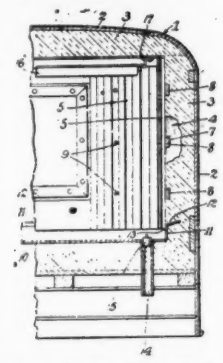
Weeks of Aug. 11 & 18

2,292,350. HEAT EXCHANGE APPARATUS. David G. Brandt, Westfield, N. Y., a corporation of Pennsylvania. Application Aug. 2, 1940, Serial No. 349,613. 12 Claims. (Cl. 261—12.)



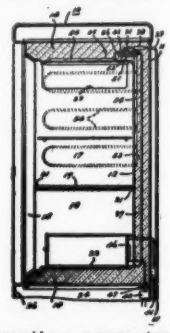
1. In a heat exchange tower adapted to effect indirect heat transfer between a fluid stream flowing upwardly through the tower in a generally countercurrent direction, the improvement which comprises a plurality of vertically spaced heat exchangers within the tower each including a pair of vertically spaced heat transfer coils disposed horizontally in the tower, the upper coil of each pair comprising a series of horizontally spaced connected heat exchange conduits each having an external longitudinal skirt extending downwardly along each side thereof, the lower coil comprising a series of interconnected horizontally spaced conduits each having an external longitudinal fin extending upwardly along each side thereof, each of said conduits in the upper coil being mounted in vertically spaced relation over a space between adjacent conduits in the underlying coil with the lower edges of its skirts laterally spaced from and extending below the upper edge of adjacent fins so that said conduits with there depending skirts and upstanding fins form baffled passages of restricted cross section externally thereof for fluid passing upwardly through the tower.

2,292,365. REFRIGERATING APPARATUS. Leonel A. De More, Oak Park, Ill. Application May 29, 1939, Serial No. 276,359. 9 Claims. (Cl 62—89.)



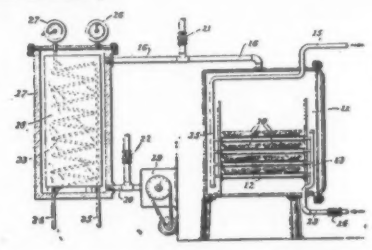
1. A refrigerating apparatus comprising a truck body, heat insulating material on the interior of said truck body, an interior refrigerating chamber surrounded by said insulating material, and having an enclosing wall in proximity to the inner face of said insulating material, the moisture which enters from the outside of said refrigerating chamber into the insulating material becoming congealed on the side of said wall nearest to said insulating material when the refrigerating chamber is in its cooled condition, said wall at its bottom being provided with an escape opening through which the water produced by melting said congealed moisture when the truck body is defrosted, is discharged.

2,292,405. REFRIGERATING APPARATUS. Donald H. Reeves, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application March 19, 1941, Serial No. 384,045. 6 Claims. (Cl. —62-116.)



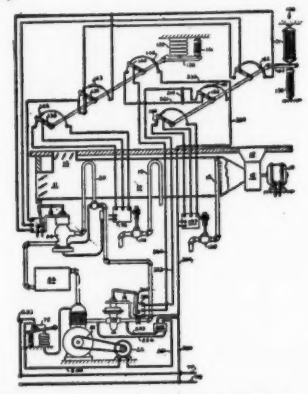
1. A refrigerating apparatus comprising in combination, a cabinet having an upper food storage compartment and a lower food storage compartment therein, a closed primary refrigerating system associated with said cabinet and including an evaporator disposed in said lower food compartment for cooling same, a closed secondary refrigerating circuit containing a volatile liquid and including a condensing portion associated with a part of said primary refrigerating system disposed above said evaporator thereof, said secondary circuit also including an evaporating portion extending over walls of said upper food compartment for cooling the interior thereof, said condensing portion and said evaporating portion of said secondary circuit being in continuously open communication with one another and means for circulating refrigerating fluid to and from said evaporator of the closed primary refrigerating system.

2,292,447. DEHYDRATING PROCESS. James C. Irwin, Jr., Kansas City, Mo., assignor to United States Cold Storage Corp., Wilmington, Del., a corporation of Delaware, and D. C. Pfeiffer and J. M. Hill, both of Dallas, Tex. Application April 22, 1941, Serial No. 389,713. 6 Claims. (Cl. 99—199.)



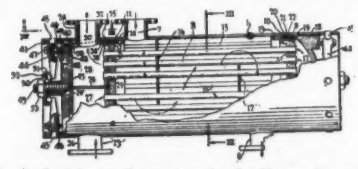
1. The method of drying a food product containing water comprising freezing said product, subjecting said frozen product to a vacuum effective to sublime the ice without permitting it to pass through an intermediate liquid phase and for a period sufficient to remove most of the water and then raising the temperature of said frozen product while the residual water is being removed.

2,292,486. AIR CONDITIONING SYSTEM. Harold L. Steinfeld, East Orange, N. J., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application Feb. 7, 1938, Serial No. 189,073. 23 Claims. (Cl. 257—3.)



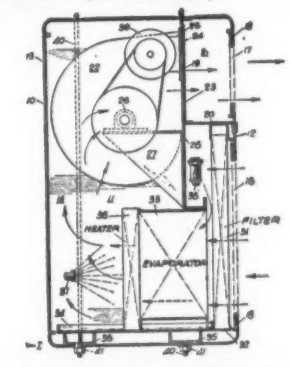
22. In an air conditioning system, a refrigeration apparatus including an evaporator for reducing the temperature of the air to be conditioned, means for controlling the temperature and effective cooling surface of said evaporator, said means including means responsive to medium high temperature and excessively high humidity in the space being conditioned for controlling the amount of effective cooling surface of the evaporator, and means responsive jointly to variations in temperature within an excessively high temperature range and to variations in humidity within a medium high humidity range in the space being conditioned for varying the temperature of the evaporator.

2,292,524. HEAT EXCHANGER. George T. Jacocks, New Rochelle, N. Y., assignor to Heat Transfer Products, Inc., New York, N. Y., a corporation of New York. Application March 19, 1941, Serial No. 384,062, 3 Claims. (Cl. 257—236.)



1. A heat exchanger, including, in combination: a metallic shell of cylindrical form open at each end; a first gasket ring positioned intermediate the ends of the shell against the inner surface thereof; a second gasket ring positioned at a distance from the first gasket ring and similarly bearing against the inner surface of the shell; a plurality of relatively long butt bars independent of the rings and extending between and abutting the rings and positioned in close contact with the inner surface of the shell; ring gaskets, one positioned on the remoter side of each ring; a fixed tube sheet; means for forcing the face of said tube sheet against the first said gasket; a floating tube sheet; tubes extended between and through the sheets and attached liquid tight therein; said floating tube sheet bearing on its peripheral face against the second gasket; means forcing the second gasket toward its adjacent ring and against the periphery of the floating sheet whereby the floating sheet may move longitudinally of the shell and a liquid tight joint may be maintained between the floating sheet and its associated gasket and means for passing fluid around the tubes and means for passing fluid through the tubes.

2,292,562. AIR CONDITIONING APPARATUS. Leroy Gale Huggins, Springfield, Mass., assignor to Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application July 15, 1939, Serial No. 284,601. 1 Claim. (Cl. 257—137.)



An air conditioning unit adapted to be mounted in the upper portion of a room and comprising a housing having an air inlet and an air outlet in a vertical wall thereof, the inlet being disposed beneath and adjacent said outlet, a partition disposed in parallel and spaced relation to said vertical outer wall and having an opening opposite to the air outlet therein, a horizontal partition extending from said vertical outer wall, between said outlet and said inlet, to said vertical partition to form therewith a discharge chamber adjacent said air outlet, a centrifugal fan having its outlet connected to said opening and disposed to discharge air horizontally there-through into said discharge chamber, said inlet extending above the lowermost part of said fan, a heat transfer element disposed adjacent said fan and in horizontal alignment with said air inlet, the parts being constructed and arranged so that air entering through said inlet flows horizontally through said heat transfer element, then to said fan, and is discharged horizontally from said fan outlet, and flows horizontally through said discharge chamber and said air outlet.

2,292,692. LIQUID REFRIGERATING UNIT. Otto R. Huber, Cincinnati, Ohio,

(Concluded on Page 15, Col. 2)

THE BUYER'S GUIDE

BULLETIN From HARRY ALTER

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All you want without priority at sensational prices. Write, wire or call.

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ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

POSITIONS WANTED

INSTALLATION ENGINEER: Refrigeration man, fifteen years' experience, out of draft, desires position in firm with government contracts. Eight years factory branch field experience installing equipment and organizing and instructing dealer service departments in the field. Will go anywhere. Prefer road work—have own car and tires. Box 1410, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

SERVICE MAN WANTED—minimum of five years experience, two of which on commercial, preferably with car. Good salary guaranteed, no winter layoffs. Write full particulars concerning experience, references, age, marital status, and salary expected. Recent photograph requested. GIBSON & PORTERFIELD, 3613 Georgia Ave., Northwest, Washington, D. C.

REFRIGERATOR SERVICEMAN: Position available in Northern Ohio for commercial man with low pressure experience. Good salary and car allowance. State qualifications in first letter. Include photograph if available. Box 1405, Air Conditioning & Refrigeration News.

WANTED: Positions available for two refrigeration engineers, who are experienced in air conditioning and commercial refrigeration by one of the nation's largest firms, handling defense projects everywhere. Also can offer unusual postwar future to right man. Please state education and experience, particularly with reference to construction and government refrigeration and air conditioning installations. All replies confidential. Headquarters in Washington with some traveling. Box 1412 Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WANTED: Used air washer, approximately 35,000 CFM rating. Also fan of same rating, and washer pump if available. POWER ENGINEERING CORP., 517 Brooks Bldg., Wilkes-Barre, Pa.

WANTED: Used Commercial Refrigeration and Air Conditioning. THE BIMEL CO., 305 Walnut St., Cincinnati, Ohio.

EQUIPMENT FOR SALE

FOR SALE: 160 "as is" used refrigerators; 35 new Crawford electric ranges; a large supply of used motors, compressors, and other refrigerator equipment. Will sacrifice whole or part as we are discontinuing our service and appliance business. Atlas Appliance Co., Inc., 921 G St., N.W., Washington, D. C.

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HERMETIC UNITS - COMPRESSORS - PARTS
FRIGIDAIRE - KELVINATOR - NORGE - G-E
Complete Line Refrigeration Parts - Tools - Supplies
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REFRIGERATION PRODUCTS
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Seamless
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ENGINEERED TO YOUR EXPECTATIONS
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ALCO VALVE CO. ST. LOUIS, MO.

Established CURTIS REFRIGERATION AIR CONDITIONING and COMMERCIAL 1864
Curtis Refrigerating Machine Division
of Curtis Manufacturing Company
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have the call. Many unusual advantages including the new convertible.
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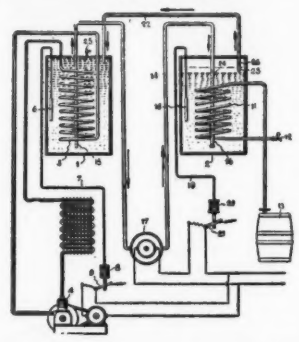
MOTORS for every AIR-CONDITIONING AND REFRIGERATION REQUIREMENT
WRITE FOR FREE DESCRIPTIVE BULLETINS
Wagner Electric Corporation
6441 Plymouth Avenue, Saint Louis, Mo. U.S.A.

Patents (Cont.)

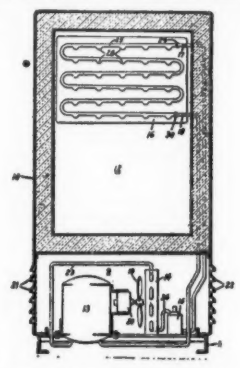
(Concluded From Page 14, Col. 4)

assignor to Francis A. Hoover, Cincinnati, Ohio. Application May 23, 1941, Serial No. 394,917. 3 Claims. (Cl. 62—141.)



1. A liquid refrigerating unit, comprising: a pair of receptacles, each providing a closed compartment adapted to hold a circulating liquid refrigerant, a refrigerant coil in one compartment, a beverage coil in the other compartment, a pair of conduits connecting said compartments, one for a forward course having an inlet adjacent the bottom of the refrigerant coil contaning compartment, and a sprayer discharging stem extending centrally and longitudinally vertical within the beverage coil compartment, the second conduit for a return course of the liquid, connecting with the tops of the compartments and for the beverage coil compartment extended to a point to bring its inlet normally above the liquid level height in said compartment for an interruption of a liquid connection therewith, and a pump interposed in said conduit for the forward course for propelling the liquid, effecting an agitating discharge flow centrally of the volume in said beverage coil containing compartment, and an elevation of the liquid level for establishing a liquid connection with the return conduit and a head pressure for displacement of liquid from said beverage coil compartment back to the other through said return course.

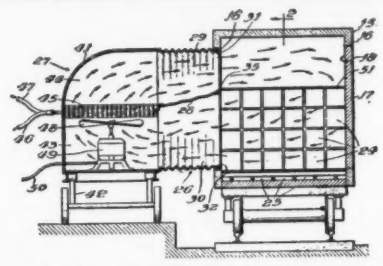
2,292,803. EVAPORATOR FOR REFRIGERATING MACHINES. Christian Steenstrup, Schnectady, N. Y., assignor to General Electric Co., a corporation of New York. Application April 17, 1937, Serial No. 137,521. 4 Claims. (Cl. 62—126.)



4. An evaporator comprising a pair of elements of sheet material secured together to provide a heat transfer wall, an inlet for receiving liquid refrigerant and an outlet for vaporized refrigerant; said evaporator having a conduit embossed in the material and extending back and forth across a face of said wall and connected to said inlet and said outlet, said conduit being enlarged at spaced intervals from said inlet to said outlet to provide a series of substantially identical reservoirs for trapping and retaining quantities of refrigerant in pools below the path of, and in communication with, the streams of gaseous refrigerant flowing towards said outlet.

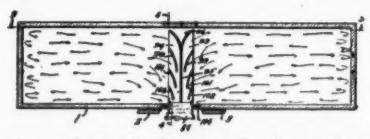
2,293,316. METHOD OF AND APPARATUS FOR CONTROLLING TEMPERATURES. Harry Y. Stebbins, Chicago, Ill., assignor to General American Precooling Corp., Chicago, Ill., a corporation of Delaware. Application June 29, 1936, Serial No. 88,050. 19 Claims. (Cl. 257—18.)

15. A method of conditioning the load of a freight car in which a space is left between the top of the load and the top of the car comprising withdrawing air from the center of the car at a point beneath the load level, conditioning the air exterior of the car, introducing the conditioned air to the above-mentioned space at the center of the car and through one side thereof, substantially preventing



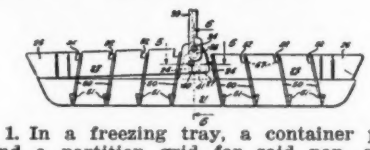
the air from passing from said space into the top of the load adjacent the center of the car while passing the air into the load adjacent the ends of the car, and then passing the air through the load to the first-named point.

2,293,360. AIR CONDITIONING METHOD AND APPARATUS. Frank J. Reilly and Maurice H. Connell, Miami, Fla., assignors, by mesne assignments, to General American Precooling Corp., a corporation of Delaware. Application Sept. 3, 1935, Serial No. 39,044. 6 Claims. (Cl. 98—6.)



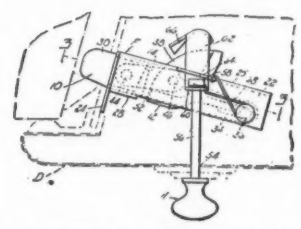
1. A method of air-conditioning a loaded freight car, comprising withdrawing air from the center and base of the car, conditioning the withdrawn air, returning the conditioned air in two streams to the car at the center and transversely thereof and above the load, deflecting one stream so that its path is longitudinal and toward one end of the car, deflecting the other stream so that its path is longitudinal and toward the other end of the car, each path being substantially the width of the car, and giving the conditioned air such a velocity that upon its impact with the car ends a substantial pressure is built up.

2,293,362. FREEZING TRAY. Frederick W. Campson and Harvey D. Geyer, Dayton, Ohio, assignors to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application March 10, 1939, Serial No. 260,962. 10 Claims.



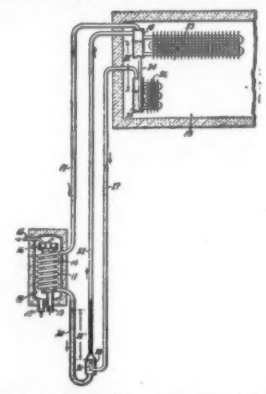
1. In a freezing tray, a container pan and a partition grid for said pan, said grid comprising: a lower longitudinal division wall, two oppositely movable upper longitudinal division walls, a series of movable cross walls cooperating with said longitudinal walls to form ice block compartments, some of said cross walls being engageable and movable by one of said upper longitudinal walls and some by the other of said upper longitudinal walls, and force-multiplying means for moving said two upper division walls in opposite directions to facilitate the removal of ice blocks from said grid.

2,293,402. REFRIGERATOR LATCH. Stuart W. Parsons, New Britain, Conn., assignor to The Stanley Works, New Britain, Conn., a corporation of Connecticut. Application July 30, 1940, Serial No. 348,463. 9 Claims. (Cl. 292—138.)



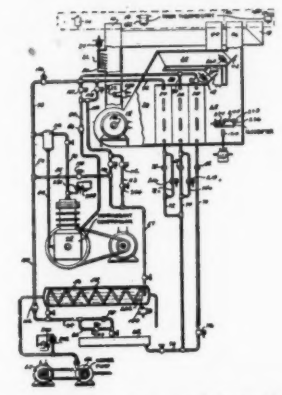
1. A refrigerator latch carried by a door including a latch bolt, means for manually retracting the latch bolt to unlatched position and inertia means for automatically retracting the latch bolt upon initial closing movement of the door and for automatically urging the latch bolt to latching position when the door reaches closed position.

2,293,522. REFRIGERATION. Albert R. Thomas, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Jan. 9, 1940, Serial No. 313,052. 5 Claims. (Cl. 62—125.)



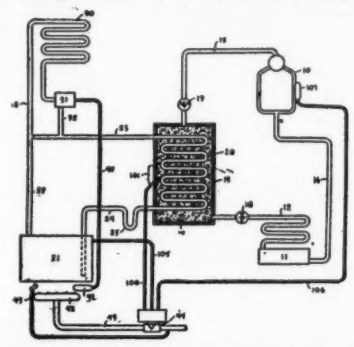
1. A heat transfer system including a closed circuit for volatile fluid having a plurality of places of evaporation, a place of condensation at a level below said places of evaporation, and a bubble type vapor liquid lift for raising liquid from said place of condensation upward to said places of evaporation, said lift utilizing vapor from one of said places of evaporation, said one of said places of evaporation being at a level below another of said places of evaporation, said higher place of evaporation communicating directly with said place of condensation, and said lower place of evaporation being segregated from said place of condensation by said vapor liquid lift on one hand and a liquid column on the other.

2,293,532. REFRIGERATING APPARATUS. Robert S. Crane, Nashville, Tenn., assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Sept. 29, 1939, Serial No. 297,168.



3. In a reverse cycle refrigerating system, a compressor, first and second heat exchange units, refrigerant flow connections between said compressor and said first and second heat exchange units, said fluid-flow connections including a refrigerant line from one of said units to said compressor, a valve in said line, means responsive to high condensing pressure for closing said valve, means for by-passing said valve, and means for controlling the flow of refrigerant through said by-pass.

2,293,556. ADSORPTION REFRIGERATION SYSTEM. Alwin B. Newton, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application April 17, 1939, Serial No. 268,233.



5. In an adsorption refrigeration system of the kind described, an adsorber, a condenser and an evaporator operatively connected together, heating means for activating the adsorber, said heating means including a heating coil within the adsorber through which flows a heat exchange medium and a fluid fuel burner for heating said medium exteriorly of said absorber, a plurality of pressure responsive means acting directly on said valve means to control the position thereof, means rendering one of said pressure responsive means responsive to the temperature of the adsorber, means rendering a second of said pressure responsive means responsive to the temperature of the evaporator, means rendering a third of said pressure responsive means responsive to the pressure of said heat exchange medium, means causing said one pressure responsive means to close the valve means when the adsorber temperature attains a predetermined high value and preventing opening of the valve means until the adsorber temperature drops to a valve substantially lower than the value at which the valve means was closed, means causing the second of said pressure responsive means to maintain the valve means in its closed position until the temperature of the evaporator has risen to a predetermined value, and means causing said third pressure responsive means to move the valve means towards closed position as the pressure of the heat exchange medium becomes excessive.

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Dealers To Get 'Unfrozen' Refrigerators In Proportion To Their Takings In 1941

(Concluded from Page 1, Column 5)

transfer on Form PD-430. The Director General for Operations of WPB will issue these certificates and "will take into consideration the number, price range, size, and type of new domestic mechanical refrigerators in the stocks of manufacturers and affiliated distributors—"

While the L-5-d amendment or WPB announcement doesn't specifically say so, what this means—according to well informed sources—is that some 50,000 deluxe models in the hands of manufacturers will be released to distributors through the PD-430 certificates. Manufacturers will be told how many of each of their models specified they may release. Distributors may then sell to dealers on a pro rata scale based on the dealer's 1941 sales.. Dealers will then sell to consumers who must sign a certificate stating that they do not now own any means of refrigeration.

EXCERPTS FROM RELEASE

The following paragraphs are excerpted from the official WPB release making the announcement of the amendment:

"Independent distributors with frozen stocks of gas and electric refrigerators may now release through their usual channels of distribution those which they had on Feb. 14, the date of the original freeze order. Retail dealers holding gas refrigerators also are permitted to sell those which they had on the same date. There has been no restriction since March 26 of the sales of electric refrigerators held by retail dealers.

"Kerosene operated mechanical refrigerators are not released under the provisions of the amended order due to the limited supply available for war agencies.

"The sole restriction on sales of gas and electric refrigerators by independent distributors is that they must be made through their normal distributive outlets, in accordance with their 1941 flow of merchandise. In addition, every consumer buying a new refrigerator under provisions of the amended order is required to certify in writing that he has no other refrigeration equipment at his disposal.

RELEASE OF STOCKS

"Refrigerators in the stocks of manufacturers and affiliated distributors may only be released with authorization of the War Production Board. If the refrigerators are for delivery to dealers and transfer to ultimate consumers, the certificate of authorization must be stamped with the words 'unlimited transfer' indicating permission to release the type and quantity of refrigerators specified in the certificate.

"Deliveries to the Army and Navy, the Maritime Commission, and the Panama Canal are permitted without restriction as in the past. The War Shipping Administration is added to this list by the amendment.

"Lindsay Morrison, Chief of the Refrigeration Section of the Consumers' Durable Goods Branch, pointed out that the released refrigerators are chiefly of the deluxe type, which have been found unsuitable for military and other war uses. In addition, small distributors and dealers have suffered unnecessary financial hardship—while tying up urgently needed warehouse space—as a result of the freeze order.

"There will still be an ample stockpile of refrigerators on hand despite the large number to be released by the order. There were approximately 615,000 units on hand June 15, 1942, and government requirements through June of 1944 are not expected to total more than 465,000 units. Production of refrigerators was discontinued on April 30, and there will be no further new equipment manufactured until the end of the war.

MAXIMUM PRICES

"Concurrently with issuance of the amended order, the Office of Price Administration announced that manufacturers and distributors maximum prices for the sale of refrigerators released by the WPB order will be established within a few days. Two amendments to the price regulation now controlling household refrigerator sales at all levels have been drafted to meet the need for establishing a method for determining maximum prices for these refrigerators. The actions will amend revised price schedule No. 102 and Maximum Price Regulation No. 110."

The text of amendment No. 2 to Supplementary General Limitation Order L-5-d follows:

Text of Amendment To Order L-5-d

Part 989—Domestic Mechanical Refrigerators

(Amendment 2 to Supplementary General Limitation Order L-5-d)

Section 989.5 **Supplementary General Limitation Order L-5-d**† is hereby amended in the following respects:

Paragraph (a) is hereby amended by adding the following new subparagraphs at the end thereof:

(8) "Affiliated distributor" means any distributor which is owned or controlled by a manufacturer or under common ownership or control with a manufacturer. A person shall be deemed to be owned or controlled by another person when more than 50% of its voting capital stock is directly or indirectly owned by such other person.

(9) "Independent distributor" means any distributor other than an affiliated distributor.

Paragraph (b) is hereby amended to read as follows:

(b) **Restrictions on transfers of new domestic mechanical refrigerators.** No person shall transfer or accept transfer of any new domestic mechanical refrigerator except as permitted under the provisions of this paragraph (b). Whenever any manufacturer or distributor is authorized to transfer new domestic mechanical refrigerators under subparagraph (3) of this paragraph (b) or under paragraph (c) (2) (i), such transfers shall be made as far as is practicable through his normal distributive outlets on a basis proportionate to his distribution of new domestic mechanical refrigerators to them, respectively, during the year 1941, regardless of any previous commitments or contracts.

(1) Any new domestic mechanical refrigerator may be transferred pursuant to a certificate of transfer under the provisions of paragraph (c) or pursuant to other specific authorization of the Director General for Operations.

(2) Any new domestic mechanical refrigerator may be transferred in fulfillment of any contract or purchase order for delivery of any such refrigerator to or for the account of the Army or Navy of the United States, the United States Maritime Commission, the War Shipping Administration or the Panama Canal.

(3) Any new electric or gas (but not kerosene) domestic mechanical refrigerator, which, at 10 a.m. eastern war time, Feb. 14, 1942, was in the inventory of a dealer, **independent distributor** or any other person not a manufacturer or affiliated distributor, may be transferred by any person to any other person without limit as to the number of transfers which may be made of any such refrigerator, provided that any transfer of a new domestic mechanical refrigerator to an ultimate consumer under the provisions of this subparagraph (3) may be made only if such transferee certifies in writing (which shall constitute a representation to the transferor and to the War Production Board) substantially as follows:

The domestic mechanical refrigerator being transferred is for my personal use (or for the use of my family, or my tenants). I have no other domestic mechanical or ice refrigerator at my disposal (or, I have disposed of any domestic mechanical or ice refrigerator which has been at my disposal since Feb. 14, 1942 to a dealer or consumer.)

.....

Any new electric or gas domestic mechanical refrigerator which at 10 a.m. eastern war time, Feb. 14, 1942 had been bought and fully paid for and was in the hands of the seller at that time, shall be deemed to have been in the inventory of the purchaser at 10 a.m. eastern war time, Feb. 14, 1942.

(4) Any new kerosene domestic mechanical refrigerator which at 10 a.m. eastern war time, Feb. 14, 1942, had been bought and fully paid for by an ultimate consumer, and was in the hands of the seller at that time may be delivered to the purchaser.

(5) Any person may distrain or levy by execution, attachment or similar form of judicial process, on any new domestic mechanical refrigerators, or repossess them on default, but may not transfer them thereafter except pursuant to the provisions of subparagraphs (1) and (2) of this paragraph (b) unless the refrigerators come within the provisions of subparagraph (3) of this paragraph (b).

(6) Any manufacturer may sell any new domestic mechanical refrigerator to Defense Supplies Corp. or any other corporation organized under Section 5 (d) of the Reconstruction Finance Corp. Act as amended, and any such corporation may resell any such refrigerators to the manufacturer from whom they were purchased.

Paragraph (c) (2) is hereby amended to read as follows:

(2) A certificate of transfer on Form PD-430 may be issued in order to permit the transfer of new domestic mechanical refrigerators:

(i) From one warehouse or place of storage to another warehouse or other place of storage, whether or not it involves any change in the ownership or title of such refrigerators;

(ii) From any person to any other person when the transfer does not come within the provisions of subparagraph (1) of this paragraph (c); or

(iii) From any manufacturer or affiliated distributor to any person, without limit as to the number of transfers which may be made of any such refrigerators, provided that (a) the words "unlimited transfer" appear on such certificate; and (b) any transfer to an ultimate consumer made under the provisions of this subdivision (iii) of this paragraph (c) (2) may be made only if such transferee certifies in writing in the form mentioned in paragraph (b) (3) of this order.

Whenever such certificates for "unlimited transfer" are issued by the Director General for Operations he shall take into consideration the number, price range, size and type of new domestic mechanical refrigerators in the stocks of manufacturers and affiliated distributors on Feb. 14, 1942 and thereafter.

Paragraph (g) is hereby amended to read as follows:

(g) **Reports.** (1) Each manufacturer shall file with the War Production Board, on or before the next business day after any shipment to or from his stock of refrigerators a report of all such shipments on Form PD-431.

(2) Each person (other than a manufacturer) holding any new domestic mechanical refrigerator which he cannot transfer under the terms of paragraphs (b) (3) or (c) (2) (iii) shall file with the War Production Board, on or before the next business day after any shipment to or from his stock of refrigerators a report of all such shipments on Form PD-431.

(3) All persons affected by this order shall file with the War Production Board such other reports and questionnaires as the Director General for Operations shall, from time to time prescribe.

(P.D. Reg. 1, as amended, 6 F.R. 6680; W.P.B. Reg. 1, 7 F.R. 561; E.O. 9024, 7 F.R. 329; E.O. 9040, 7 F.R. 527; E.O. 9125, 7 F.R. 2719; sec. 2 (a), Pub. Law 671, 76th Cong., as amended by Pub. Laws 89 and 507, 77th Cong.)

Issued this 5th day of September, 1942.

Director General for Operations.

†7 F.R. 3927, 4480, 4848.

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